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Original Articles.

DOWNWARD DISPLACEMENT OF THE TRANSVERSE COLON. THREE CASES, WITH AUTOPSIES.[1]

BY CHARLES HERMON THOMAS, M. D.,
Surgeon to the Philadelphia Hospital.

A DEFORMITY of the transverse colon, consisting in the elongation of that portion of the large intestine and its displacement downward in the form of a loop or festoon, has been observed by me in three instances in private practice. Autopsies were had in them all. In the first the most dependent portion of the gut was found midway between the umbilicus and the pubic symphysis; in the second it was deeply impacted in the cavity of the pelvis; and in the third it reached the level of the umbilicus.

A positive diagnosis was not made in any of the cases, although in two of them the striking clinical conditions present were studied with special care in association with experienced and highly skilled observers. In the second in order of occurrence, the relationship between it and the preceding one suddenly occurred to my mind, and was communicated to the operator while on our way to make the post-mortem examination. In the third case the actual condition present was strongly suspected before death. So that in both of these latter special precaution was used at the autopsies to avoid disturbing the relative position of the abdominal viscera until their location had been accurately determined.

The lesion here described seems to be of rare occurrence. Thus far I have failed to discover a single recorded case; and not until this paper was nearly completed was I able to find any published reference to the condition, however vague. Several months ago I asked the assistance of Dr. Formad, who informed me that in a series of autopsies, numbering over 2000, which he had made, he had not observed an instance of like character. He has also kindly sent me the following note: —

"UNIVERSITY OF PENNSYLVANIA,
December 15, 1882.

"DEAR DR. THOMAS, — . . . I looked very thoroughly through the literature of intestinal lesions, but did not meet any record of misplacement of the transverse colon.

"Very truly yours, H. F. FORMAD."

CASE I. Male, aged eighty years, a retired gentleman, came under my care August, 1874, as a patient of Dr. J. J. Levick, who had placed his practice in my charge during his vacation, and who informs me that there was no previous history of abdominal disease.

The symptoms present were extreme emaciation, feebleness, anorexia, and a profuse but fitful diarrhœa. The abdomen was retracted and somewhat tender upon pressure. There was no complaint of pain except at intervals of three or four hours when the diarrhœa had ceased for a time. Coincidently with the cessation of the diarrhœa a tumor about five inches long and two inches wide, of firm consistency, and visible on inspection, appeared beneath the thinned abdominal walls in a transverse position midway between the umbilicus and the symphysis pubis. The tumor persisted but an hour or so at a time, disappearing immediately upon the return of the diarrhœa. During the periods of continuance of the tumor the pain was so severe as to rapidly weaken the patient. This condition of alternate flux and painful tumefaction was repeated several times daily until death took place. During the attendance upon the case there were associated with me Dr. Albert H. Smith and a distinguished physician from another city — a near relative of the patient. With attention fully directed toward it, and after repeated observations, we were unable to frame a reasonable hypothesis as to the exact character and origin of the tumor. Death occurred September 12th, about three weeks from date of attack.

Autopsy. In the presence of Dr. Levick and the relative mentioned I made the abdominal section. To the former I am especially indebted for the specimen obtained, and which is still preserved.

Upon laying open the abdominal cavity the transverse colon was found to be greatly elongated and proportionately narrowed, the loculi being nearly obliterated, forming a loop open at the top similar to the letter U, the most dependent portion occupying the position of and constituting the tumor as above described, that is, the horizontal portion of the loop rested upon the small intestines, midway between the umbilicus and the pubic symphysis.

CASE II. Female, aged fifty-four years, a lady of delicate frame and refined habits of life, was under my charge for about ten months prior to her decease. During the greater portion of this period Dr. James H. Hutchinson was associated with me in the attendance. Dr. Charles K. Mills also saw her for me during my vacation. The patient had previously been attended by a homœopathic practitioner who had diagnosticated her condition as enlargement of the liver and stricture of the rectum. The latter supposed condition he had treated by the introduction of rectal bougies; this practice being afterward abandoned on account of the pain produced, and the lack of beneficial results.

Profound cerebrasthenia from other causes, with several months of delirium, and which finally led to a fatal result, served greatly to complicate the issues involved. The abdominal conditions which had been recognized from the beginning were thus either masked or placed entirely in abeyance during much of the time.

The more prominent symptoms recognized were: —

(1.) Pain, referred chiefly to the region of the liver and extending both upward and downward, which pain was aggravated by walking, and was described as of a dragging, tearing character, and which had existed for four years or more. It was very much relieved by the recumbent posture, and after some months spent mostly in bed almost entirely vanished.

(2.) Obstinate constipation, with indications of obstruction, even a liquid passage being voided with difficulty. The capacity of the rectum to retain enemata was also diminished to two ounces.

(3.) Two solid tumors, elongated in form and of the consistency of solid fæces, were discovered, located one on each side of the abdomen, and evidently just beneath the parietal structures. They were vertical in position, and about eight inches distant from and so parallel to each other, and were traced from the border of the ribs to within about two inches of the pelvic brim. This condition was observed but a few times, and at considerable intervals; at other times it was absent. The hypothesis was adopted that these masses

[1] Read before the Philadelphia County Medical Society, October 17, 1883.

were the ascending and descending colon, respectively, in a state of fæcal impaction.

Death occurred March 30, 1882, supervening upon a severe mental shock. An autopsy was made by Dr. William M. Gray two days later, Dr. Hutchinson and myself being present. To quote from Dr. Gray's notes: "Upon opening the abdomen found complete prolapse of the transverse colon. It was carried beneath the pubis and rested on the bladder. The large intestine was much narrowed, and was filled throughout with hard nodulated fæces; the meso-colon was absent, and the omentum, which was free from fat, was extremely atrophied; the rectum was normal, showing no evidence of stricture; the liver was of normal size, but upon microscopic examination showed marked cirrhosis."

Thus that which had appeared to be the ascending colon proved to be the descending limb of the displaced transverse colon, and that which had seemed to be the descending colon was shown to be the ascending limb of the same malformation.

The pain which had previously been felt in the region of the liver, and which had been relieved by recumbency, had manifestly been caused by the sharp flexure of the colon contiguous to it, and the rectal obstruction by the crowded condition of the pelvis produced by the invading loop of large intestine.

CASE III. Male, aged thirty years, a tailor's cutter, under attendance nine days prior to decease. The subject of advanced Bright's disease, with "hyaline, epithelial, and granular tube casts, also mucous cells, compound granule cells, and free oil globules," he was extremely exhausted thereby. He also complained of severe pain in the abdomen to the right of and slightly above the level of the umbilicus. Upon inspection and palpation of the part no enlargement or induration was discovered, but light percussion developed an intensely tympanitic sound confined to the region described. Misplacement of the transverse colon was suspected, and the region kept under observation for any evidences of fæcal impaction which might, but which did not, present. Death occurred suddenly, March 19, 1883. Autopsy two days later by Dr. William M. Gray, operator, Dr. William H. Burke and myself being present.

The following notes were made by Dr. Burke: . . . "Body rather emaciated, and showing signs of commencing decomposition. On opening abdomen absence of fat noted; omentum normal. Peritonæum showing traces of lymph and pus, in the pelvic region especially, but no general inflammation. Tranverse colon empty, distended with gas, and has a sharp flexure at its centre, bending obliquely downward and toward the right, to the level of the umbilicus, thence sharply upward to its normal position. Meso-colon intact and apparently normal except in length. No sign of fæcal obstruction at the point of flexure. Both kidneys scirrhotic; capsule adherent, and secreting structure destroyed."

Evidently the heightened tympany localized near the umbilicus, which had been previously recognized and ascribed to the presence there of a portion of the transverse colon misplaced, had in reality been so caused.

No adhesions of the displaced parts were found in any of the cases cited. The intestinal fault was probably not the cause of death in any of them. Taking them together, it will be seen that clinical conditions and post-mortem appearances agree in at least one important particular, namely, the location of the displaced intestine in contact with the anterior abdominal wall and below its normal site.

The normal anatomical relations of the colon have a special significance in the light of these cases from a diagnostic point of view. The ascending and descending portions of the colon are, normally, to be found in contact with the *posterior* or lumbar wall of the abdominal cavity, — behind the small intestines, — and are there bound closely down by reflections of the peritonæum. The transverse colon, on the contrary, is normally in contact with the *anterior* abdominal wall — in front of the small intestines — where it is loosely suspended by the transverse meso-colon, a structure of considerable length.

It therefore appears to be a practical impossibility for the vertical portions of the large intestine to become spontaneously misplaced anteriorly. But of the transverse colon, its displacement downwards, — in which changed position its relation of contact with the anterior abdominal wall is retained, — these cases show to be a condition of repeated occurrence.

Conclusions. (1.) Displacement of the transverse colon downward within the abdomen may be to any degree, partial or complete.

(2.) Such displacement will present as solid tumor if the bowel be in a state of fæcal impaction, or as a limited area of heightened resonance if the bowel be distended with gas; but in either case the displaced part is to be found *in contact with the anterior abdominal wall.*

(3.) The occurrence of intra-abdominal tumor situated below the normal site of the transverse colon, and having the same general configuration as the colon, such tumor being of a certain consistency, and presenting evidences of being in contact with the anterior abdominal wall, or the occurrence of areas of special typmpany with like outlines and similarly located, constitute diagnostic signs strongly indicative of downward displacement of the transverse colon.

A FATAL CASE OF INTERNAL URETHROTOMY.[1]

BY GEORGE W. GAY, M. D.

MR. D., aged twenty-three years, conductor, had had more or less difficulty in passing his urine for two years, having been obliged on several occasions to resort to a catheter. October 16, 1883, he was again seized with retention, which repeated efforts at catheterization failed to relieve. The bladder was finally aspirated above the pubes, and the patient sent to the City Hospital.

During the next three days he passed a fair amount of urine, the bloody character of which was supposed to be due to lesions of the urethra. His treatment consisted in rest in bed, diuretics and diluents, fomentations to the hypogastrium, and complete rest to the urethra. As the patient seemed to be in good condition, and it was evident from his history and from his very sensitive urethra that some more radical treatment was necessary, he was etherized and examined on the 19th of October. Five inches from the meatus was a stricture, which admitted only a fine whalebone

[1] Read before the Surgical Section of the Suffolk District Medical Society, November 7, 1883.

bougie; upon this a tunneled sound was passed through the obstruction; with a urethrotome the stricture was then carefully cut and dilated till a No. 25 steel sound passed quite easily. The hæmorrhage was unimportant. The immediate after-treatment was morphine hypodermically, large doses of quinine, fomentations to perinæum and abdomen, and liquid diet.

About six hours after the operation the patient had a chill, and on the following day there was complete suppression of urine. He was pulseless, delirious, had vomiting, high temperature, and a congested skin. He was put on infusion of digitalis, squills, and acetate of potash; fomentations of digitalis leaves to the abdomen; gin and cream of tartar for a drink; food and stimulants by the rectum.

Two days later the urine began to flow, but the nervous symptoms were not improved. Free catharsis was produced with elaterium, when there was a temporary change for the better in that respect. It was of short duration, however, and in spite of hot-air baths and a fair secretion of urine he became comatose, gradually failed, and died six days after the operation.

The autopsy was made by Dr. Gannett, and his report is as follows: —

"The first five inches of the urethra from the meatus showed nothing unusual. The next two and a half inches, extending to the prostatic portion, showed numerous rents in the mucous membrane parallel to the course of the urethra. The mucous membrane was here of a reddish-brown color, and was covered with a shreddy, diphtheritic false membrane. The surrounding corpus spongiosum was indurated.

"The bladder contained about two ounces of a thick, blood-red fluid. The muscular walls were doubled in thickness. The mucous membrane thickened, velvety, of a reddish-black color, in portions covered with a diphtheritic false membrane and fine, gritty material.

"The mucous membrane of the pelvis ot the kidney showed a few circumscribed patches of hæmorrhagic pyelitis. The kidneys were both enlarged, dark-red in color, with several opaque-gray lines extending from the cortex to the apices of the pyramids. Microscopically the kidneys showed cloudy swelling of the epithelium of the convoluted tubules, and extensive hæmorrhages into the tubules.

"The lesions were as follows: laceration of urethra, diphtheritic urethritis, hæmorrhagic-diphtheritic cystitis, pyelo-nephritis. Evidence of general septicæmia was found in the cloudy swelling of various organs."

Dr. Gannett's report, as well as the state of the organs shown you, prove that there was no extravasation, no abscess nor unusual inflammation about the seat of stricture; nor were the lesions consequent upon the operation more severe or more extensive than was to be expected. There were no false passages, no gangrenous patches nor sloughs in or about the urethra. There was simply a firm, dense stricture, which had been cut or torn (and from the local appearances no one could have told which); nor was there anything whatever to indicate that the operation had produced unusual violence, or had been followed by unusual local changes.

This patient died from acute pyelo-nephritis, septicæmia, and uræmia, the immediate and exciting cause of which was undoubtedly the operation. The predisposing causes were very probably the long-standing inflammation of the bladder and urethra, and the consequent irritation of the nervous system.

It may be said that this was a case for external rather than internal urethrotomy, and also that if less violence had been done to the urethra the result might have been different. I can only say that I have operated on a good many similar cases in precisely the same manner with good results. On the other hand, I once lost a strong and apparently healthy man from suppression of urine four days after a single and easy passage of a steel sound. Hence I cannot think that the fault was entirely in the operation.

RECENT PROGRESS IN OTOLOGY.

BY J. ORNE GREEN, M. D.

STATISTICS OF EAR DISEASE.

IN a painstaking article Bürkner[1] has brought together all of the statistics of ear diseases which he has been able to find, and analyzed and tabulated them as far as was possible. Although, like all figures, these give us but dry reading matter, they nevertheless, from the large number of cases, bring out many interesting facts. It should, however, be borne in mind that they are open to the objection of all similar medical statistics, in that the observations are made by many different persons of various degrees of ability, in many countries, and under various circumstances, so that we must hesitate to accept many of the tables as giving anything more than a distant approximation to the truth. For instance, under the causes of ear disease we find the percentage referred to scarlet fever, measles, small-pox, typhus, etc., given, but it is evident that unless such figures extended over many years for the same town, they would be somewhat variable, according to whether there had been epidemics of those diseases. Tables of results of treatment in public clinics are always open to doubt, if, for no other reason, on account of the difficulty of keeping the cases under observation for a length of time. Others of the tables are of undoubted value.

AGE.

Of 34,532 patients 22.4 per cent. were less than 15 years old.
Of 34,532 patients 59.3 per cent. were between 15 and 50 years old.
Of 34,532 patients 12.9 per cent. were over 50 years old.
Of 41,287 patients 77.8 per cent. were less than 15 years old.
Of 41,287 patients 22.2 per cent. were adults.

SEX.

Of 37,920 patients . . 60.3 per cent. were men.
Of 37,920 patients . 39.7 per cent. were women.

PART OF EAR AFFECTED.

Of 58,645 patients . . 25.5 per cent. external ear.
Of 58,645 patients . 66.9 per cent. middle ear.
Of 58,645 patients . . 7.6 per cent. inner ear.

This table, from eighteen different sources, in comparison with the older tables of Wilde and Kramer, is interesting as showing the tendency of modern investigation to find disease in the middle ear, and is the direct result of pathological study and improved methods of examination. The same thing has been noticed in the study of eye diseases.

WILDE'S TABLE.

Of 2330 patients . . 55.8 per cent. external ear.
Of 2330 patients . 39.5 per cent. middle ear.
Of 2330 patients . . 4.9 per cent. inner ear.

[1] Archiv für Ohrenheilkunde, vol. xx., p. 81.

KRAMER'S TABLE.

Of 300 patients	16.5 per cent. external ear.
Of 300 patients	47.3 per cent. middle ear.
Of 300 patients	36.2 per cent. internal ear.

A large and interesting table of the percentage of different diseases is given, based upon the observation at sixteen different clinics of 43,730 patients, but no résumé is possible, and we can only refer to the original.

WHICH EAR MOST FREQUENTLY AFFECTED.

Of 3255 patients	60.3 per cent. both ears.
Of 3255 patients	17.6 per cent. right ear only.
Of 3255 patients	22.1 per cent. left ear only.
Of 2242 patients	54.0 per cent. both ears.
Of 2242 patients	20.0 per cent. right ear only.
Of 2242 patients	26.0 per cent. left ear only.

SEASONS OF ACUTE DISEASE.

The absolute frequency of acute disease according to months was as follows in 478 acute diseases among 2242 patients: —

September	5.7 per cent.	January	8.6 per cent.
August	6.7 per cent.	June	9.0 per cent.
July	6.9 per cent.	December	9.0 per cent.
October	7.2 per cent.	February	9.9 per cent.
April	7.8 per cent.	March	10.3 per cent.
November	8.1 per cent.	May	10.8 per cent.

But the relative frequency, that is, the percentage of acute disease in the whole number in attendance for each month was: —

July	12.3 per cent.	November	22.5 per cent.
August	16.1 per cent.	April	25.0 per cent.
September	17.0 per cent.	March	25.2 per cent.
June	17.9 per cent.	February	26.5 per cent.
May	18.6 per cent.	January	29.7 per cent.
October	22.0 per cent.	December	37.7 per cent.

Bürkner's conclusions are as follows: —

(1.) The most frequent causes of ear diseases are colds, affections of the nose and naso-pharynx, and the acute infectious diseases.

(2.) The predisposition to ear disease increases from birth to the fortieth year, and then decreases.

(3.) Men are more frequently affected than women; the proportion being about three to two.

(4.) Of all diseases of the ear about twenty-five per cent. are of the external ear, sixty-seven per cent. of the middle ear, and eight per cent. of the inner ear.

(5.) The left ear is more frequently diseased than the right, the proportion being about five to four.

(6.) The acute middle-ear diseases are less common in summer than in winter.

(7.) Of all cases of ear disease in the polyclinics fifty-three per cent. were cured, thirty per cent. improved, seven per cent. unimproved, and 0.3 per cent. ended fatally.

PERFORATIONS OF SHRAPNELL'S MEMBRANE.

The inflammation, perforation, and ulceration of this small triangular portion of membrane lying above the short process of the hammer, to the serious nature of which attention was early called in this journal,[1] is the subject of two instructive articles[2] by Morpurgo and Hessler. Both authors acknowledge the serious nature of the disease on account of the difficulties of treating it successfully, and on account of its complications; both have found it a somewhat rare disease, each reporting eleven cases, although the proportion of cases to the whole number of patients seen is not given. But few such statistics can be found. Moos, in 126 perforations, found perforations of Shrapnell's membrane four times, and Marian in sixty-two cases of chronic purulent inflammation of the middle ear found one perforation of Shrapnell's membrane.

Morpurgo would divide the cases of the disease into two classes: those in which the pathological process is localized and confined to the upper cavity, and those in which the whole tympanum is involved. The different appearances of the disease on inspection are well described; the dry unswollen membrana tympani wholly destitute of polish; the marked prominence of the short process and manubrium and the basin-shaped, sunken drum-membrane; the variable size of the perforation from a small opening up to a loss of the whole membrana Shrapnelli, or even a still larger opening due to destructive caries of the upper osseous edge of the tympanum, which even allows the niche of the oval window, the Fallopian canal, and the prominence over the horizontal semicircular canal, to be seen.

A very marked characteristic is the frequent absence of a perforation whistle on inflation of the tympanum. In eighteen cases of the disease four only gave this perforation whistle. The explanation of this Morpurgo finds in the recent anatomical studies of Prussak and Politzer, which, although differing somewhat in their details, agree so far as to acknowledge a system of cavities in what has been called the superior pouch of the drum-membrane, which cavities communicate with the drum cavity only by a very narrow opening. This narrow opening becomes closed by the swelling and secretion accompanying the inflammation, and therefore no passage is afforded for air from the tympanum to the meatus, even although the whole of Shrapnell's membrane has been destroyed. Morpurgo has proven experimentally both that the cavity behind Shrapnell's membrane communicates, when in its normal condition, with the tympanum, and that when this cavity becomes inflamed such communication with the tympanum ceases. In fourte n cases in which Shrapnell's membrane was normal he made a small perforation, and in all of them obtained a perforation whistle on inflation; in one of these cases, where the perforation whistle was obtained immediately after the operation, a moderate inflammation followed, and no perforation whistle could then be obtained. After the wound had healed, and the inflammation had subsided, another perforation was made, and the perforation whistle again obtained.

Caries with resulting granulations and polypi are complications of the disease.

The diagnosis of a general or localized inflammation Morpurgo makes from ocular inspection. If an otorrhœa with perforation of Shrapnell's membrane exists, and inspection shows the drum-membrane in toto swollen and reddened, with the hammer indistinct, the inflammation is a general one of the whole tympanum. If inflammatory changes are, however, only seen in the neighborhood of Shrapnell's membrane, and the rest of the drum-membrane is unchanged, and no communication with the tympanum proper exists, as shown by inflation, the process is a localized one. If in a similar case the drum-membrane is sunken like a basin, its mobility greatly impaired, and a perforation whistle is absent, a general inflammation has existed, but has disappeared leaving more or less alteration in the tympanum. The degree of deafness Morpurgo does not

[1] Boston Medical and Surgical Journal, March 26, 1874.

[2] The Pathology and Therapy of Perforations of Shrapnell's Membrane, Morpurgo, Archiv für Ohrenheilkunde, vol. xix., p. 264, 1883. Ditto, Hessler, Archiv für Ohrenheilkunde, vol. xx., p. 121, 1883.

consider of value in differentiating between the general and the localized process.

The therapy of perforations of Shrapnell's membrane, or rather of purulent inflammations of the upper tympanic cavities, cannot be left to the patient. Intratympanal injections are absolutely necessary, as the common injections of the meatus wholly fail to remove the secretion. For this purpose Morpurgo uses Weber's tympanic catheters, and for a fluid a saturated watery solution of boracic acid. The natural perforation is often insufficient to allow a thorough evacuation of the retained secretion, and then Morpurgo recommends enlarging the opening in various directions, especially upwards, by incisions, thus freely exposing the complicated cavities above Prussak's pouch. As the most useful in the further treatment of the case, a combination of the disinfecting intratympanic injections with the alcohol treatment has been found the best, spiritus vini rectificatissimus with an equal quantity of distilled water injected by the tympanic catheter, and used as an ear-bath for a quarter of an hour twice daily. Polypoid growths and caries of the bone require their own proper treatment. In chronic cases of the disease Morpurgo has not had satisfactory results with powdered boracic acid after Bezold's method, but in an acute case this treatment gave a brilliant result.

In forty cases collected by Morpurgo polypoid growths were present in twenty-one. Six cases were acute, and in four of these the perforation closed rapidly; in two the disease became chronic. The remaining thirty-four were chronic, and in seven of these the perforation closed; in twenty-six no closure took place, or the result was unknown, and in one case death resulted from meningitis. The ages of the patients were as follows: —

Ten years old	1 case.
Between 11 and 20 years old	4 cases.
Between 21 and 30 years old	14 cases.
Between 31 and 40 years old	14 cases.
Between 41 and 50 years old	4 cases.
Between 51 and 60 years old	3 cases.

The duration of the disease varied from a few days to more than twenty years.

Hessler bases his article on the study of eleven cases in private practice, and agrees entirely with Morpurgo in the clinical symptoms and appearances which the latter has described. He found the disease in just one per cent. of all cases treated, and his youngest patient was but four years old. In all the cases the suppuration was slight in quantity, but always from the very beginning fetid. In six the head was free from the pressure and pain which often accompanies this form of inflammation, while in four there was long-continued and recurring pain and pressure on the same side as the ear disease. In nine the perforation was in the upper and anterior part of Shrapnell's membrane. In one it was in the posterior upper quadrant of the same membrane, while one was acute and had not been perforated. In only two cases was there a communication between the Eustachian tube and the suppuration, so that a perforation whistle could be obtained. As the results of treatment in four there was complete healing of the suppuration and closure of the perforation. In one the same result was probably reached. Two others were still under treatment, and two were unsuccessful.

The treatment of these cases Hessler considers must depend upon whether the suppuration can be reached only from the meatus, cases in which there is no communication with the tympanum proper, and consequently no perforation whistle, or whether it can be also reached from within, cases in which the tympanic communication exists. The latter are the most amenable to treatment, and he uses in them daily syringing with disinfecting solutions both from the meatus and from the Eustachian tube, and more stress is laid upon the thorough cleansing than upon the degree of concentration of the disinfectant. The use of powders he does not approve, as they are apt to hinder the evacuation of the secretion. Where caries exists the bone should be scraped with the sharp curette, and this should be followed by cauterization with silver nitrate or with the galvano-caustic. With caries of the head of the hammer the curette cannot be used, and the cauterization only can be applied. Galvano-caustic is preferred to the knife for enlarging the perforation when that is necessary, as the opening remains longer. The reaction from the galvano-caustic, although generally slight, is sometimes very marked, requiring suspension of the application for two or three weeks. Where such reaction does not take place the cauterization is repeated every six or eight days, and between times the thorough cleansing of the suppuration is continued daily. In case of exudation forming in the tympanum proper this should be evacuated by paracentesis. In this treatment by cauterization Hessler differs from Morpurgo, who thought his results were better from alcohol than from cauterization.

For the second class of cases, those in which there is only a communication with the meatus, but none with the tympanum, Hessler, not finding the results from disinfecting injections in the meatus and cauterization satisfactory, although they were not used with Weber's tympanic catheter, tried to convert them into cases of the first class by puncturing with the galvano-caustic in the upper and posterior part of the drum-membrane. In only one case, however, was he able to get the desired communication with the tympanum, and in that the daily disinfecting injections produced a cure.

PRESSURE IN THE TREATMENT OF BUBOES.

O. Petersen[1] treats buboes, after fluctuation is clearly determined, as follows: A large incision is made and the cavity of the abscess is cleaned out with a sharp spoon. The bleeding is stopped, and iodoform powder is applied. Then comes the pressure bandage, which is the important principle in this treatment, and its application is as follows: First a ball or wad of salicylic cotton or some soft, pliable material, made antiseptic with salicylic acid, is formed of the size of the cavity, and placed over it; upon this wad are then placed several layers of the same material; then a second ball or wad made of tow or oakum, and about four times as large as the first, is placed upon this. Over this oil-silk or wax-paper, and the whole is firmly fastened with a gauze or elastic bandage. This bandage remains unmolested, as a rule, from seven to ten days. The average length of healing, in a trial for three years of this method, was twenty-three days; previously the average was from seventy to ninety days. Twenty per cent. of the cases healed under one bandage, twenty-five under two, twenty under three; more than seven bandages were in no case necessary. The average number of bandages was two.

[1] Centralblatt für Chirurgie, November 17, 1883.

New Instruments.

A NEW HIP SPLINT.

BY A. T. CABOT, M. D.

THE splint which I shall describe has been in pretty constant use at the Boston Children's Hospital for several years. It is easily made, is very efficient, can be adapted to a variety of conditions, and costs but little.

The foundation material is a wire rod from three sixteenths to one fourth of an inch in diameter, which can be readily bent with wrenches or in a vise to the form shown in Fig. 1.

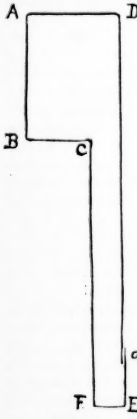


FIG. 1.

The free ends are then lashed together with copper wire at *a*.

The measurements required are:

D E. From the axilla to a point one or two inches below the heel; or if desired the splint may be finished to reach only to just below the middle of the calf.

A D. The width of the trunk.

A B. From the axilla to a point midway between the crest of the ilium and the top of the trochanter.

F E. Two to two and a half inches, according to the size of the leg.

A D and B C are then to be bent to conform to the curve of the back; it being particularly important that B C shall be sufficiently curved to jump across the sacrum without exerting injurious pressure upon it. Lastly, the rods running longitudinally are to be bent so as to adapt themselves accurately to the curves of the back, hip, and knee.

This frame, especially in those parts which cross the body, is to be thickly wound with strips of cotton batting, and the whole covered with Canton flannel tightly stretched across it. Lastly a swathe is to be stitched onto the body part of the splint (A B C D).

After the frame is accurately fitted to the curves of the body the patient is to be laid upon it, so that point B takes its bearing on the gluteus muscle of the well side, and C rests a little outside the sacro-iliac synchondrosis on the affected side. The pressure of the splint is thus borne by parts well padded with muscles, and if B C is sufficiently curved the sacrum and surrounding bony prominences are not pressed upon. It is, however, a good precaution to put a large sheet of cotton batting upon the splint to still further protect against the danger of a bed sore.

The frame being accurately adjusted the swathe is to be pinned firmly round the body, and the leg is bandaged to the leg part of the splint.

When applied as I have described, the splint fits the patient comfortably but firmly, and as it leaves a considerable interval between the anus and any part of itself, it can be kept clean, and consequently can be worn for a long time without changing.

Besides its use in hip disease, this splint is of value in the treatment of fractured thigh in children. With


FIG. 2.

coaptation splints to the sides and front of the thigh, and with a foot piece, Fig. 2, added to the splint to prevent the rolling of the foot to one side or the other, we have perfect immobility of the fractured bone, and are able to move and handle the child with entire freedom, and without causing the least pain. Another obvious application is to cases of excision of the hip. Here again we need a foot piece to prevent rotation of the leg, and the wires where they pass behind the hip are divested of padding and can then be thoroughly cleansed and included in an antiseptic dressing. The splint has been so used in several cases of excision with satisfaction. The patients were free from pain and were easily moved. One child, indeed, was carried from Boston to Nova Scotia while the wound was far from well without discomfort or apparent detriment to the joint. If it is desired to combine extension with fixation, it can be done by fastening to the outer rod D E an arm coming forward and curving round the side just below the crest of the ilium. By a buckle attached to the top of this arm, and another behind the splint, a band can be carried through the perinæum. At the end of the leg of the splint are then to be attached two buckles through which the extension straps can be drawn and held down, or if desired an arrangement with a ratchet and pinion fastened to the foot of the splint will provide for more steadiness of extension.

Lastly, this frame, if fitted to reach only to the middle of the lower leg, can be used like a Thomas' hip splint in the ambulatory treatment of hip disease, the patient walking about with a high shoe on the well foot and crutches.

It would seem at first sight that the splint would interfere with the patient's sitting down, but practically, if the body part is not made too wide, the splint is not more uncomfortable than a Thomas' splint in this respect, and it has the decided advantage that it is less likely to be displaced.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

S. J. MIXTER, M. D., SECRETARY.

NOVEMBER 7, 1883. DR. G. W. GAY reported

A FATAL CASE OF INTERNAL URETHROTOMY.[1]

DR. GANNETT exhibited the specimen, consisting of the whole urinary tract of Dr. Gay's patient.

DR. A. T. CABOT asked Dr. Gay whether he did not think that a catheter left in the bladder immediately after the operation would, by providing for a free escape of the urine, have diminished the danger of death from suppression in this case. Dr. Cabot also asked if the result in this case would cause the reader to adopt some other method of operating in similar cases in future.

DR. GAY said that in such an unfavorable case for operation he should be inclined to do external urethrotomy, though it is an operation to be avoided if possible, as it often leaves the patient with urinary fistulæ, and necessitates a much longer after-treatment than the

[1] See page 2 of this number of the JOURNAL.

internal treatment. It is, perhaps, well to risk some thing in doubtful cases. The reader had since per formed internal urethrotomy in a case of stricture two inches from the meatus, the operation being followed by quite severe symptoms for forty-eight hours. The reader and all the other surgeons at the City Hospital had for some years abandoned the practice of leaving a catheter in the bladder after divulsion or internal urethrotomy, as they considered that it rather diminished than increased the chance of a favorable result.

In reply to a question by Dr. Watson, the reader said that the danger to life was decidedly greater in the internal than in the external operation. After the latter there is almost no fear of abscess, pyæmia, or other septic processes.

In reply to a question by Dr. Garland, Dr. Gay said there was almost no conceivable condition of the urinary tract where the surgeon should refrain from operating by some method to relieve symptoms of retention and stricture as severe as were present in this case. It is of primary importance to relieve the stricture, as that is the cause of the whole trouble, and must be removed before a change for the better in the bladder and kidneys can be hoped for. When, however, the symptoms were not severe, and the stricture could be kept well open by means of gradual dilatation, he was of the opinion that any operation should be avoided.

DR. GANNETT said that the changes seen in the bladder in this case were ante-mortem, and due to the long-standing cystitis caused by the stricture, while the pyelo-nephritis and diphtheritic inflammation of urethra and bladder followed the operation, the process spreading from the lower to the upper part of the urinary tract, probably by means of micro-organisms which passed up the ureter, and which may have been present in the bladder for some time. In cases where the kidneys are infected in this way the inflammatory process often skips from the bladder to the pelvis without manifesting its presence in the ureters.

DR. CHEEVER called especial attention to the much greater safety of the external operation of urethrotomy, which almost always gives a good result as regards the life of the patient, although it is usually adopted only in the most severe cases. After this operation the bladder is allowed to empty itself in the easiest possible manner, and perfect drainage is permitted.

The subject for discussion was

EXCISION IN HIP DISEASE; ARE ITS PROGNOSIS AND ITS RESULTS BETTER THAN THOSE OF A SPONTANEOUS CURE.

DR. E. H. BRADFORD, in opening the discussion, said that it was impossible at present to deduce from the facts as yet presented exact surgical laws regulating excision, and cases will have to be judged chiefly according to their individual merits. Certain facts, however, have been collected justifying some generalizations of value, which may be grouped as follows: —

(1.) As to the immediate danger from the operation.

(2.) As to the chance of ultimate recovery after the operation.

(3.) As to the usefulness of the limb after such recovery, and the time required before such a result is gained.

(4.) As to the probability of and requisite length of time for a "natural" cure, and the subsequent usefulness of the limb.

It may be said as a preface that this consideration of the subject is limited to cases of hip disease, and chiefly of children under puberty.

I. There can be little doubt that among the grave surgical procedures excision of the hip cannot be considered an extremely dangerous one. The rate of mortality directly due to the operation, according to the report of the London Clinical Society's Committee, is fifteen per cent.[1] According to Culbertson the mortality from partial excision is nineteen per cent., and from complete excision thirteen per cent.[2]

II. Forty-six per cent. of the cases of complete excision collected by Culbertson, and forty-three per cent. of partial excision, died within six months of the operation.[3] According to the London Clinical Society the mortality was, in 320 cases, forty per cent.[4] Antiseptic surgery would appear to have lessened the rate of mortality, for Grosch, in 126 cases of the operation done under the strictest antiseptic precautions, reports a mortality of 36.7 per cent., and that in the last half of the decade during which the list of operations was collected the mortality was nine per cent. less than in the first half of that period, during which an apprenticeship to strict antiseptic principles was being served. The mortality also varies according to the stage of the disease at which the operation is performed, being 0 at the first stage, twenty-four per cent. at the second, and sixty-seven at the third.[5]

III. It would appear from the clinical facts presented by Mr. Holmes that the limb after the most successful excision is not as useful as after a "natural" cure,[6] This is emphatically the opinion of the London Clinical Society,[7] and this view is apparently substantiated by a comparison between the anatomical appearances in the few reported cases of autopsy after successful excision with those found in a natural cure.[8] The process of absorption and repair in the natural cure is a gradual one, and the bone becomes firmly welded in place by the slow deposits of the ossifying ostitis which follows the destructive ostitis of the original disease; only such portion of the bone is removed as cannot be saved, and the fragment of the neck and head becomes well surrounded and securely held in an acetabulum gradually altered in the successive processes of disease and repair. After excision, on the contrary, a large fragment of bone is removed, and the subsequent union with the ilium in the most successful cases is by ligamentous and fibrous bands, forming in some cases a false capsule, and if ossification ultimately takes place it can hardly be thought that the parts will be as accurately fitted as is the case after the more gradual process. A flail joint at the hip, or one approaching it, is certainly not so useful as a stiff joint. Cases which appear to be cured sometimes are ultimately not as satisfactory in the result as was at first considered probable. Case 464, Culbert-

[1] British Medical Journal, May, 1881.
[2] Trans. of American Medical Association, 1876.
[3] Culbertson does not consider many of these deaths (that is, twenty-six per cent. of them) as attributable to excision, and classifies them as due to "other causes." A list of the diseases, however, makes it clear that this is hardly just; bed sores, amyloid disease, Bright's disease, meningitis, are all to be considered in estimating the chances of ultimate cure. According to the London Clinical Society about four per cent. of the deaths were due to causes other than the disease and not influenced by the operation.
[4] British Medical Journal, May, 1881.
[5] Centralblatt f. Chir., No. 14, 1882, p. 229.
[6] Medical Times and Gazette, November 3, 1877.
[7] Loc. cit.
[8] New York Medical Journal, April, 1879. Archiv f. klin. Chir. Band xix., Heft 2, pp. 400-411.

son's Table, was reported as perfectly cured, and three years later was found in a permanently crippled condition, with a useless limb.[1] Furthermore it has not been found that antiseptic dressings have any influence upon making the limb ultimately more useful, or upon the length of time necessary for a permanent cure. This, according to the London Clinical Society, is one and three quarter years; according to Culbertson 190 days. It is manifest, however, that it is difficult to obtain figures of great value bearing upon this point.

IV. In comparison with these figures Dr. Gibney reports the results of "natural" cure to be as follows: Eighty cases of recovery were recorded; no particular treatment being followed beyond constitutional (forty-eight of these had abscesses); cure was established in seventy-one of these before the fifteenth year, the disease lasting, in thirty-three, three years; in twenty-eight from three to six years; and in one case fifteen years. In only eight of these cases did such a deformity exist as to interfere with walking. Out of the eighty cases, in twelve there was a recovery in motion of from fifteen to ninety degrees.[2] Better results are of course obtained, as far as the usefulness of the limb is concerned, where careful and continued treatment can be carried out for a long time than where the limb is practically left to itself. The results reported by Dr. Judson[3] clearly demonstrate this, as well as that remarkable results can be obtained even in desperate cases by the conservative treatment. Cazin found in five years that in eighty cases of suppurative hip disease treated by the expectant plan —

Forty-four were cured (fifty-five per cent.).
Twenty not cured (thirty-three per cent.).
Ten died (twelve per cent.).

Of these fifteen were complicated by albuminuria, and five died, six were not improved, two were improved, two were cured.[4]

The mortality, according to the London Clinical Society, in suppurative cases treated conservatively was thirty-three per cent.; forty-two per cent. were known to be cured, and the duration of treatment of those who recovered was two and a half years, the duration of the disease being four years. In non-suppurative cases sixty-nine per cent. were cured (the duration of the disease being three years), ten per cent. died, and twenty per cent. remained incomplete.

Taking the facts, imperfectly recorded as they are as yet, it may be roughly stated that in one hundred average cases of excision about forty die, and of those who recover about twenty-five will have limbs that they can walk on without a cane, twenty-five will need a cane or crutch, and five will have limbs that are useless. The limbs will probably not be as useful as if the patients had survived the disease with the average result of a "natural" cure, the chances for which in an average suppurative case may be placed roughly at fifty in one hundred. The time required for a cure after the operation will be probably somewhat less than if no operation is performed.

Recurring again to statistics and quoting from Culbertson: nearly a half of those who recovered from the operation had "perfect" limbs (that is, they could walk without support); about the same number had "useful" limbs, and could walk with and without apparatus; five to seven per cent. had worthless limbs. Out of some eighteen cases Mr. Holmes was able to examine three from eleven to thirteen years after the operation, and but one was able to bear the whole weight upon the affected limb. It may be said, therefore, that excision of the hip is a measure to be resorted to only as a last resort and as a life-saving remedy, and is indicated in cases of profuse suppuration and continued loss of strength in spite of thorough treatment for some time, as well as in cases where the course of the temperature indicates a demand for complete drainage. Mr. Holmes has expressed the matter well as follows: "The operation has a claim for adoption from its success in saving life where natural cure seems improbable. These cases are rare, if care for years can be provided."

DR. A. T. CABOT said that he regarded excision of the joint in hip disease as a life-saving operation, to be resorted to only when recovery by the natural powers is manifestly impossible. Cure by anchylosis is the most favorable result which can follow an extensive caries of the head of the femur, and the pelvis adapts itself so readily to the changed condition of things that a patient with the hip anchylosed in a good position has a very serviceable limb upon which he can walk with often but a slight limp. As Dr. Bradford has just shown, the fibrous articulation frequently resulting from an excision is, in the majority of cases, far less useful than an anchylosed joint, so that the best result of excision is no better than that which follows spontaneous cure, and the limb is necessarily shortened by the length of bone removed.

In a severe case of hip disease, then, the first thing is to fix the joint with an appropriate apparatus and to use every effort to promote bony union. If abscesses form they should be freely opened, the tubercular lining membrane should be thoroughly scraped out, sinuses should be followed up and curetted, and any rough bone which is reached should be removed. Counter-openings should be made, if possible, behind the hip-joint so that they may be dependent, and secure thorough drainage. Abscesses treated in this way heal much more readily than after a simple opening.

If in spite of all care the patient steadily loses ground, and suffers continuously from hectic, particularly if pain in the hip is a prominent and distressing symptom, then the removal of the diseased head of the femur and of the tubercular material about the joint is demanded.

As cure by anchylosis is the result to be sought it is of the greatest importance to apply an apparatus after excision which shall provide for perfect fixation, and which shall allow the dressings to be changed without movement of the joint.

Dr. Cabot showed a splint which he had used upon four cases of excision with entire satisfaction, and which is fully described in another part of this journal.

DR. GANNETT showed a section from a tuberculous joint in which the tubercles were plainly visible with a lens of low power, and spoke of the tendency of the process to become general throughout the body unless it yielded to proper treatment.

DR. CABOT said that, as Dr. Gannett had shown, the disease was to a great extent a morbid growth, which tended to recur if not fully removed unless the natural powers of the patient were great enough to resist its further progress. In case, therefore, that the

[1] New York Medical Journal, April, 1879
[2] New York Medical Record, March 2, 1878.
[3] History of Three Cases of Hip Disease in the Third Stage.
[4] Bull. de la Soc. de Chir., No. 5, 1876.

sinuses continued to discharge freely for a long time it would be a wise course to follow them up by a second operation, and again, with a sharp spoon, scrape out all granulation tissue which could be found either in the soft parts or in the bones.

DR. ROYAL WHITMAN showed a patient of Dr. C. D. Homans whose right hip had been excised nineteen months before.

The patient entered the City Hospital October 4, 1878, at the age of four, with a history of a fall six months previously, which was followed by gradually increasing pain and lameness.

The examination showed an obliteration of the right gluteo-femoral fold, moderate flexion of the thigh upon the abdomen, and considerable limitation of motion on the affected side.

He was treated by rest in bed with extension, and left the hospital six months later, wearing a Sayre's short splint.

In October, 1880, he entered the hospital, the symptoms being about the same as on his last admission. He remained there for two months, and the acute symptoms having subsided, he was discharged. On October 11, 1881, he again entered the hospital, with a history of a fall followed by pain and increasing disability.

The examination showed the leg to be flexed almost at right angles to the body. Dr. Bradford, under ether, forcibly extended the leg, and the child was placed in bed with eight pounds' extension. He remained in the hospital for three months, and was then discharged, on crutches, wearing a high shoe. At that time the leg was straight, and there was considerable motion in the joint. On January 31, 1882, he entered the hospital for the fourth time, with the usual history.

Examination showed pain on motion, obliteration of the gluteo-femoral fold, moderate flexion and fixation of the joint, with a hard, elastic semi-fluctuating swelling in the groin. He was placed in bed, and a T splint and extension were applied.

At the end of three months, as there had been no improvement in the symptoms, Dr. C. D. Homans decided to excise the hip, which was accordingly done on April 10th, 1882, the head of the bone being removed at a point two inches below the trochanter, and the acetabulum, which was found to be roughened, was thoroughly scraped. Very little shock followed the operation, and there was an immediate improvement in the condition of the patient.

After the operation the patient was placed upon a frame, moderate extension applied, and the leg kept in a fixed position. The wound was dressed with iodoform and salicylic cotton. The patient was discharged February 5, 1883, the wound having completely closed. Since this time his health has been perfect.

At the present time examination shows the following result: The leg is somewhat smaller than the other, and there are two and one half inches shortening. The head of the bone appears to be in close apposition to the acetabulum. The wound has completely closed, and there is no pain or tenderness about the seat of the operation. A certain amount of limited motion still remains at the joint. The patient walks easily, with a considerable limp from the shortening. If the body is steadied he can support his weight upon the limb without discomfort.

DR. CHEEVER regretted the absence of many of the older surgeons who had had such a large experience in the treatment of these cases, and spoke especially of the good work done by Dr. Buckminster Brown in this field. Fifteen years ago, when almost all authorities favored excision, Dr. Brown predicted that the opinion in regard to the operation would be greatly modified in time, and that it would be reserved for carefully selected cases. At that time the traumatic or constitutional origin of the disease was in dispute, but now almost all cases are regarded as the results of a tuberculous process.

It seems to be true that if a patient with hip disease does not recover before puberty the result is generally fatal. Dr. Cheever spoke of a patient who died at the age of twenty-two of hip disease that began in early childhood. Before death there were extensive sinuses about the joint and thigh, and the process had extended across the pelvis and in every direction until both sides of the pelvis, both nates, the sides of the abdomen, and even the thoracic wall, as well as the rectum, were the seat of extensive suppurative processes.

On the other hand patients may recover the use of the limb and fairly good health, though there may be occasional relapses. One patient, an active business man, wears a splint, and is quite well, though occasionally, if he remains in this cold climate in winter, abscesses form about the seat of the old disease. Another similar case is that of a young lady, who is quite well except for an occasional small abscess. These cases were treated without operation. Another case in which excision was performed was seen thirteen years after the operation with extensive sinuses, and in all respects as badly off as, though he had never been treated.

Constitutional treatment is all important. Fresh air and nourishing food are absolutely necessary, and often these alone seem to effect a cure. At Rainsford Island Hospital many cases of hip disease were formerly received; many in a very reduced and wretched state. These received little treatment beside plenty of plain, wholesome food and plenty of fresh sea air, and the number of recoveries was remarkable. It is often difficult to decide whether there is a loose sequestrum in the joint, though bare bone can be easily recognized. Bony crepitus is not always obtained after etherizing, as the joint is filled with granulations. No one doubts that excision is the proper treatment in desperate cases; but it should be borne in mind that the disease is apt to recur in the shaft of the femur after the head has been excised; that the limb after a spontaneous cure is almost always stronger; and that there is less shortening and greater power of eversion than after excision. If openings are made they should be large, and free drainage should be encouraged.

DR. BRADFORD spoke of the peculiar liability of children with hip disease to carbolic poisoning, and mentioned a case where the drip was employed after excision, the death of the patient being undoubtedly due to carbolic absorption. No bad effects have been noticed in a large series of reported cases where a solution of corrosive sublimate had been used, except slight diarrhœa in two cases, supposed to be due to absorption.

DR. CABOT spoke of the beneficial effect of iodoform in the treatment of local tuberculosis, it having almost a specific action upon the tuberculous granulations. He had used it in comparatively small quantities, dusting it on and injecting it in oily solutions.

NEW YORK NEUROLOGICAL SOCIETY.

REGULAR meeting of December 4, 1883. DR. WILLIAM J. NORTON, President, in the chair.

DR. GEORGE W. JACOBY read a paper upon

NEUROTIC AFFECTIONS ACCOMPANYING JOINT LESIONS.

The history of the subject goes back as far as Hippocrates, by whom it is mentioned. John Hunter was the next to take any note of it, and it is with him that originated the sympathetic theory. Malgaigne, 1826, and within the last ten years, Weir Mitchell, Duchenne, Verneuil, Sir James Paget, and Charcot and his pupils, comprise the list of names that have cast light upon the subject. The experiments of Valtat show conclusively that as a result of injury to the articular or even to the periarticular tissues produced by irritant injections the muscles of the entire limb, but more particularly the extensors of the joint, become atrophied. The result of the experiment given in the paper, as shown by the autopsy, is that the extremity which was experimented upon lost eighty grammes in weight in twelve days, and that each and every muscle separately weighed less than its corresponding fellow of the left side.

The affections which most frequently follow joint disorders are paralysis and atrophy of the muscles and hyperplasia of the subcutaneous connective tissues. More uncommon are anæsthesia, hyperæsthesia, analgesia, hyperalgesia, and neuralgias.

Three groups of nerve functions are implicated: motility, sensation, and nutrition. Symptoms are, after the joint lesions, a change in the appearance of the limb. The extensor muscles are generally the ones involved.

There is a change in the electrical reaction of the muscles, their contractile power is diminished, and finally lost. There is no reaction of nerve degeneration, no reversion of the normal contraction formula. This is also most noticeable in the extensors. The paralysis may appear as early as twenty-four hours after the accident; may also appear very late. The hypertrophy of subcutaneous connective tissue seems to stand in a direct ratio to the atrophy of muscular substance. The atrophy is ascending and progressive. Contracture is rare. The disorders of sensation are early symptoms, and differential diagnosis between these affections and progressive muscular atrophy may become difficult.

The conclusions which I am entitled to draw from the notes of thirty cases are: First. That in all cases except those involving the ankle or wrist-joint the muscles affected were the extensors of the diseased articulation. Second. That in those cases which involve the ankle or wrist-joint the affection is descending instead of ascending, and that the extensors are not affected to any greater extent than the other muscles. Third. That in cases of arthritis of any of the joints of the fingers the interossei muscles suffered first and most.

The cases which present particular interest are the following: —

CASE I. Mrs. L., age thirty-four, while walking, slipped and fell, striking her right knee. The joint rapidly increased in size, and was very painful. The following day it was very much enlarged, the patella pushed forward, and fluctuation was distinctly noticeable. The joint affection improved rapidly, but upon the seventh day a distinct paralysis was noticeable. The movement of flexion of the leg upon the thigh was easily executed, but that of extension was performed with great difficulty. Patient could only by the strongest effort produce any contraction of the triceps cruris. As the effusion became absorbed the paralysis increased, and at the end of three weeks it was impossible for her to extend the leg at all. Atrophy was now well marked, showing a difference of three centimetres in favor of the healthy limb. The gluteal muscles were also involved. The electro-contractility of the muscles was decreased to both currents.

CASE II. This case shows how soon after the injury paralysis and atrophy may ensue.

Patient, a laborer, age thirty-four, was struck upon the left knee on a Friday afternoon. He applied ice to the joint. The swelling went down. I saw him upon the following Monday, seventy-two hours after the injury, and then a distinct paralysis of the triceps cruris was noticeable, and atrophy was distinguishable upon the following Friday.

CASE III. By this case may be seen how entirely disproportionate the effect may be to the cause.

Patient, L. H., merchant, age thirty. While walking his left ankle-joint turned, the outer margin resting upon the ground. Notwithstanding severe pain he continued his walk. Used the joint for several hours. When he examined his foot he did not notice any change in the appearance, but it was painful on pressure. After two months he noticed a slight weakness in the injured leg, which was particularly observable upon going down stairs. Four months after the accident I saw him. His condition was then as follows: His foot hangs with the toes pointing downward, and cannot be brought to a right angle with the leg. He walks upon his toes, and does not bring his heel to the ground. The toes may be easily raised, but they fall back again by their own weight. The interossei of the foot are atrophied. The peroneal muscles, the muscles of the thigh, are also involved. The gluteus maximus is evidently considerably atrophied, for a large depression takes the place of its former prominence. Added to this severe neuralgia of the sciatic and peroneal nerves rendered a condition almost unendurable.

The pathogenesis of the affection is still a disputed one. The sympathetic of Hunter, the pressure theory of various writers, the theory of functional inertia, then that of Vulpian, which is reflex, and finally those of Decosse and Charcot, are all incapable of satisfactorily explaining all of the cases.

The treatment, in order to be successful, must be varied and adapted to each special case. The chief agents at our disposal are: electricity, massage, mechanotherapic and hydrotherapic in the form of hot and cold douches. Massage in very many cases seems to deserve preference to the electrical currents. The effects producible by massage are: —

(1.) The diffusion of any articular effusion. (2.) The comminution of vegetation. (3.) The loosening and destruction of adhesion. (4.) Increase of circulation. (5.) Stimulation of muscular fibres.

In fact, all the agents above mentioned seem to act similarly by stimulating the nutrition of the affected muscles, by increasing the flow of blood to the parts, and perhaps thus causing a reflex excitability of the motor tracts.

After reading the paper the subject was thrown open for discussion. Dr. Charles Fayette Taylor said: This is a subject with which I have considerable familiarity, as all persons who are extensively engaged in the treatment of joint affections must have, but it is too large to even touch upon in many of its aspects, in the limited time at my disposal to-night, even if I had prepared myself for such a discussion by having previous intimation of the direction it would take. I should prefer to have the subject arranged before speaking of it, especially as I shall be obliged to differ from the essayist, both as to the pathology and treatment of the neurotic disturbances attending or following joint diseases of the character which he has set forth in the paper. In regard to the pathogenesis, I do not think it is necessary to adopt any peculiar theory, or to assume that even any special deviation from the ordinary course of nerve function takes place in order to account for all the facts observed in these cases. The difference is one of degree only. A person is attacked with inflammation of the knee-joint, for instance; this is rapidly followed by diminished size of the muscles controlling the action of that joint, with diminished and sometimes even with entire loss of muscular action. But loss of muscular action is by no means evidence of loss of muscular power. The nerve centres are unquestionably affected; but, most of all, the cerebral nerve centres are the seat of the greatest disturbance. No theory can be adequate which leaves the cerebral nerve centres out of the account, and the consequent mental element which plays, in my opinion, so important a part in these cases. The simple loss of muscular action, consequent on an attack of inflammation of the knee-joint, is sufficient to account for an immediate diminution of the size of the muscles whose freedom is curtailed. This is the certain result from mechanical restraint alone. But if, besides the mechanical restraint of position or retaining apparatus, there is added the mental restraint of fear, the difference in the rate and amount of muscular atrophy is enormously increased. Mental restraint acts similarly to an Esmarch's bandage; it squeezes the very life out of a muscle. As a very simple proof of the remarkable effect of mental restraint in causing muscular atrophy, let me mention those frequent instances accompanying disease of the hip-joint. These cases often apply with limbs attenuated to the last degree. That a large portion of the muscular attenuation, accompanying somewhat long standing hip-joint disease, is due to the mental restraint of motion, which might cause suffering, is proven by the fact that the application of proper mechanical protection, by which the mind is relieved of the fear of pain, is followed by immediate increase of muscular growth. This is so common and well-known a fact that advantage is constantly taken of it in the management of cases. My observation of the effects on the muscles of joint diseases must amount to some thousands of cases, and I never saw a case of atrophy which, in my opinion, could not be perfectly explained by non-use and mental restraint.

In regard to the therapeutics of muscular atrophy and loss of action following joint disease, I fear I must differ from the essayist quite as widely as in its pathogenesis. So far as the muscular wasting has been caused by non-use, during the progress of the arthritis, it is sufficient to set them to work again, after the inflammation has subsided. And, I may say, in passing, that muscles stubbornly refuse to act, or if forced to act, they as stubbornly refuse to develop during the progress of an arthritis. You must wait until the joint is well before you can expect the muscles to act readily enough, after there is no longer any joint affection, except for the restraint which is often maintained for a long time by mental impressions formed during the progress of the arthritis. It is astonishing to notice how deep and lasting the impressions made on the cerebral nerve centres may sometimes be. Whatever the treatment may be, I do not believe it can be of any direct service so long as there continues a mental restraint over the muscles; and it is equally true that whatever will remove such mental restraint will cure the atrophy. So important do we, in our practice, consider the mental influence over the muscles, attending and following joint diseases, that we take special pains to get and to keep the direction of that influence, for the very purpose of hastening the recovery of the muscular power, after curing the joint disease. But the object of treatment should be to divert the mind from the affected member rather than to keep up attention to it by local treatment. It is true that massage will sometimes seem to do much good to the atrophied muscles; but this is apparent and indirect rather than real and direct. Massage has elements of mental diversion and control, which may be properly and usefully employed. But, with a large experience in its use, I am free to say that I think it is very much overestimated as a direct therapeutic agency. Its direct effect on the muscles is very slight, and what there is is not exercise. Exercise involves nerve action as the initial force. Massage merely assumes to promote the forward displacement of a certain small portion of the tissue fluids. But such propulsion of the fluids contained in the soft parts, even if effected, is not exercise nor a rational substitute for exercise. Only by the legitimate use of the nerve centres, especially of the cerebral nerve centres, can there be any action deserving the name of exercise. To regulate such nerve centre function, when disturbed by the strong impressions made by joint inflammation, is the indication presented in the cases under discussion. In most cases time alone is sufficient. In others, any means which effects a diversion of attention, whether done to the affected member or at a distance from it (which is the safer plan), will effect a cure. Incidentally, massage, electricity, the manipulations of the so-called "bone-setters," as well as the "animal magnetism" of the more arrant quacks, all do appear to produce wonderful results in a certain number of cases. The results are real, but are not produced through any direct effect on the parts, but through the incidental impressions made on the cerebral nerve centres; that is, on the mind. The worst of it is that in a large number of these cases direct treatment to the part affected by the mental restraint tends to increase the mental impressions, and to indefinitely postpone that unrestrained action of the muscles by which alone they can regain their power. The most difficult cases within my experience have been those who have had their attention to the affected member kept up by too much local treatment after the joint inflammation had passed away.

Dr. L. Weber has seen some cases of muscular atrophy following joint disease, and remembers one in particular which may be of interest to the Society.

Mr. J. W., age thirty-two, merchant, of nervous temperament, but strong and active, made a tour through

Switzerland in the summer of 1870. Being a good pedestrian, he traveled mostly on foot, but after a severe Alpine tramp in the upper Engadine he was taken with synovitis of the right knee-joint. When the effusion had passed away the extensor muscle above the knee had wasted considerably; the patient was unable to walk, and reached New York with difficulty. On examination the joint was found to be in good order again, but the atrophy of extensor muscle was still very marked, and the patient, by the support of a cane, walked, but not without difficulty. A four weeks' course of faradization made no appreciable change, and although he was assured that he would regain the use of his limb completely in the course of time, he was not satisfied, but grew despondent, and finally left for Europe to consult Professor Erb. The latter told him the paralysis was not in his limb, but in his mind, that he should go about and exercise and live well and he would soon again regain the full use of his muscles. He followed the doctor's advice, and returned to New York early in the spring of 1880, in perfect health. As to the pathogenesis of the disorder, the doctor believes that the muscular paresis and atrophy in the case reported and in others of a like manner is of reflex origin, and that functional disturbances of motor centres in the brain, and not in the spine, is probably the cause of the trouble.

Of massage and its effect in such cases, as reported by the author of the paper, he has no personal experience, but has seen excellent results from its proper application in sub-acute joint diseases, muscular rheumatism, and bad sprains.

DR. E. C. WENDT said that the paper had brought out several points of interest, especially as regarded ætiology, symptoms, and the hopefulness of treatment. He was sorry to find, however, that the reader had nothing new to offer in explanation of the pathogenesis of these conditions. Admitting the correctness of Sappey's views concerning the richness in nerves of the articular and periarticular tissues, it certainly seems thoroughly puzzling why acute polyarticular rheumatism was not more frequently followed by just such accidents as Dr. Jacoby had described. Again those more chronic joint manifestations dependent upon the gouty diathesis, where profound structural alterations were frequently observed, only quite exceptionally led to atrophy, paralysis, and to other neurotic disturbances alluded to.

Upon these points he was sorry to find that the paper under discussion left us as much in the dark as we had been before.

With regard to massage, although his experience was limited, it was yet sufficient to fully convince him of its utility in certain cases. Of course, there is massage, and massage. But when properly and systematically applied it is useless to try now to dispute its beneficial action. The combined experience of a large number of competent men placed its usefulness beyond the pale of doubt.

DR. HEITZMAN said: When I was a student in Vienna a girl, twenty-five years of age, fell down stairs and acquired serous gonitis, after which she was paralyzed and confined to her bed for five years. She was sent to a water cure. A physician there urged her to walk in order to enable him to judge about the degree of the disease, but she began crying, and said she was unable. She went home in despair; her sister asked her to make at least an effort to walk. After considerable urging she got out of bed and walked. This illustrates that mental influence has much to do with these affections.

I would call the attention of Dr. Jacoby to an article by Dr. Micoladoni, published in 1871, in the *Wien. Med. Jahrbücher*. I have seen his specimens with the nerves brought out by the use of chloride of gold, and, from my observation, I am convinced that these terminal nerve fibres are not stable and unchangeable formations, but, on the contrary, new nerve fibres may form at any time of life from the living matter present in all tissues.

I am thoroughly convinced that nerves may disappear and appear, according to certain physiological necessities, certain physical conditions of the body, such as, for instance, results of exercise.

In an inflammation of a joint, the synovial and capsular wall being the seat of pathological changes, of the breaking down of the tissue, certain nerve fibres of the sensitive sphere will be within its range, and we should know that a certain number of them perish altogether.

Dr. Jacoby to-night did not give a theory of his own, but he quoted various authors. It certainly was the best plan for him to pursue, as so very little is known even in our day about nervous action.

We know that by the inflammatory destruction of a number of sensitive nerve fibres in the capsule of the joint at once three spheres are involved: the motor, for there is paresis or paralysis; the sensory, for there is pain; and the vaso-motor or trophic, for there is emaciation.

So far as my insight goes I am convinced that the living matter in a reticular arrangement produces the gray matter and all essential portions of nerves, including the axis-cylinder. This fact is thoroughly acknowledged by Professor Stricker at Vienna.

There may be loss of living matter of certain nerves, in consequence of inflammation, and loss of contractility, with impaired conduction towards the centre. We then have comparative rest in a limited portion of the spinal cord, or even the brain, for the reticulum of living matter is set at rest for a time, without there being a material change in the living matter of the gray substance and ganglionic elements.

If massage will reëstablish the activity of muscles we are prepared to understand that the field in the spinal cord before out of action may at once be brought in motion, and the motion communicated at once to the motor ganglia and all the sympathetic centres, which are situated along the spinal cord, as physiologists agree upon. The nervous action may for a certain time be impaired or dulled, because the reticulum of living matter is in comparative rest, lacking an impulse from without. So soon as such an impulse is carried to the resting portion, either by mental action, energetic will, or by mechanical shock, such as is done in massage, or in any other way, the contraction of the living reticulum is induced, and the normal condition reëstablished. Neither the assumption of centripetal neuritis nor the theory of reflex-action can explain the phenomena observed after the inflammation of articulation and their sometimes speedy cure.

DR. HENRY LING TAYLOR said: I can contribute a case showing the beneficial effect of the use of the body battery. A woman, under the care of Dr. J. West Roosevelt, at the Roosevelt Hospital Dispensary, of middle age and neurotic personal and family history,

presented, among other symptoms, that of prickling sensation down right arm and in right hand. There was no joint trouble. Dr. Roosevelt and myself regarded it as one of the neurotic disturbances incident to a person of her temperament. The body battery was tried for its psychical effect, and the woman returned in two days with the abnormal sensations gone. The symptoms had lasted a considerable time. The same treatment was applied to her hand without effect during the week she has since been under observation. I regard the result in this case as entirely due to mental influence.

Before concluding my remarks I wish to speak of an interesting class of cases alluded to by Dr. Gibney, the pseudarthroses. We have in these cases nearly or quite all the symptoms enumerated by Dr. Jacoby in his paper, atrophy, hyperæsthesia or anæsthesia, etc., following mental restraint, there being no affections of the joints. I regard the trouble as functional, and seated mainly in the brain, and not in the spinal cord as Dr. Gibney believes, if I understand him. Almost anything calculated to make a profound impression on the higher nerve centres will often prove curative in these cases. This is, in my opinion, one of the most important effects of massage.

I have in mind three cases of ankle trouble following sprains, seen three to five months after injury. The acute symptoms had subsided, but pain, tenderness, and such impaired function as to cause limping persisted. These patients had been treated with supports, etc., for several months. Physical examination showed no local trouble not readily explained by mental condition. There had been recovery from the sprain without a corresponding readjustment of the nerve centres to the new condition. The patients were perfectly and rapidly cured by purely psychical treatment. I do not doubt that massage often accomplishes the same result through its psychical effects in similar cases, but it is an empirical method as generally employed.

DR. GARRIGUES said: What little experience I have had with massage is in its favor, but that is almost nothing compared with that of Dr. Taylor. Nevertheless I have used massage for ten or twelve years. I became acquainted with it when quite new, and have found it most excellent for secondary conditions and for treatment to which Dr. Jacoby alludes.

DR. MORTON said a few words upon the subject of the continuous body battery and its use. The battery consists of a simple pair of elements. I well recollect a case in which I used this with good effect. A gentleman came to me with chronic arthritis. Associated with it was paralysis of the extensor group of muscles; the foot was dropped and the toe dragged. He said no form of electricity that he had tried had done him any good. I told him that I would give him a battery which he could wear all the time, which consisted of pieces of silver and zinc connected by copper wire. The zinc was shifted about upon different parts of the body; a constant current was kept up, which could be tested at any time with ordinary litmus paper. While under alkaline treatment the battery worked with better results, the excretions being saline.

This battery is also useful in the treatment of chronic ulcers; the granulations formed will be found much more healthy. It is also beneficial in chronic eczema. This much he would add to the practical part of the paper, since the main question after all was treatment.

DR. GIBNEY said that at times it is very difficult to determine whether the atrophy precedes or follows joint diseases. It is his opinion that it is more frequently the accompaniment of epiphyseal disease than joint disease proper, and he wished to emphasize the fact — for a fact it is according to his observations — that the majority of grave lesions about joints in childhood was epiphyseal, in other words, a chronic epiphysitis. Synovial disease he believes to be rare. If one examined a hip, for instance, said to be the subject of disease, marked atrophy is usually found in the thigh and calf muscles long before any pronounced joint symptoms are presented.

The atrophy, he further stated, is confined to the muscles and not to the bony tissue. For it is a rule that in chronic epiphysitis, about the knee for instance, the epiphysis is actually elongated. He, in common with many other orthopædists, has long since regarded acute atrophy as one of the most constant signs of chronic articular ostitis, and he believed the atrophy to be purely reflex, and not the result of disease or of the pressure from apparatus or bandages.

One argument brought against mechanical treatment, namely, that atrophy was produced, is fallacious. The clinical history of these bone lesions proves this conclusively.

He was not sure whether chronic synovitis induced atrophy, but he was very positive in stating that in acute synovitis atrophy was rather the exception than the rule.

A class of cases presented certain neuroses which were very valuable in excluding bone or joint disease. These are known as spinal pseudo-arthropthy, and known furthermore as neurosis of the joint, neuro-mimosis, hysterical joints, Brodie-joints, etc. The neuroses referred to were neuralgia, hyperæsthesia, anæsthesia, but rarely any atrophy. He believed that they had their origin in the spinal cord and the meninges, and the readiness with which they responded to spinal treatment confirmed him in his belief.

Furthermore, the neuralgia of chronic articular ostitis of the hip is well known, and the knee branch of the obturator is never affected early, and very often late in the disease, although this is denied by some writers, and especially a recent writer, Dr. Clippingdale.

In some of the most advanced cases of caries of the hip this obturator neuralgia is very distressing. Very frequently the sciatic nerve is involved, and in some cases narrated, especially one in a young lady with old disease at the hip, the sciatica was most distressing, and yielded very poorly to drugs and electricity.

The question of paralysis and degenerative nerve changes being sequences of chronic arthritis was one about which he did not feel fully convinced.

He referred to a case of chronic arthritis of the knee in an old woman who had paralysis of most of the muscles of the thigh and leg, and it was thought by some who saw the case that the paralysis was dependent on the joint lesions, but the proof was not by any means conclusive.

DR. JACOBY said: The first point to which I desire to reply is that brought forward by Dr. Taylor. He said that he believed these nervous changes, particularly the paralysis and atrophy, were produced by psychical or mental influence, and that they might be relieved by attention to this point. I am at considerable variance with him as regards the effect that mental in-

fluence has in the production of these disturbances. I for my part cannot understand how mental uneasiness can produce an atrophy, which is easily diagnosticated by the tape, of a certain muscle, and that in the short time of three days. But, as the doctor has promised us a paper upon this subject, perhaps that will succeed in convincing me.

As regards the opposition which the massage treatment has received, I expected it would receive more. Massage has, especially in the United States, been very much in the hands of non-professional men, and consequently has been greatly abused and misapplied. But I hardly think there can be any question as to its efficacy in suitable cases and when properly applied.

The theory advanced by Dr. Heitzman is very similar to that of Professor Charcot, who, as I mentioned in the paper, believes that certain parts of the cord are in a state of inertia or stupor.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

PREVENTION OF PUERPERAL INFECTION.

AT the December meeting of the Society, held Friday evening, the 21st, DR. H. J. GARRIGUES read a paper on the above subject. It was mainly devoted to an account of the manner in which puerperal septicæmia had been eradicated under his management from the wards of the Maternity Hospital on Blackwell's Island. This is in connection with Charity Hospital, to which all obstetric patients were transferred from Bellevue Hospital about the year 1875.

In this year the number of confinements was 515, and the deaths, fifteen, a mortality of 2.67. In 1876 there were 536 confinements and twenty deaths, a mortality of 3.73. In 1877 there were 480 confinements and thirty-two deaths a mortality, of 6.67. In 1878 there were 225 confinements and seven deaths, a mortality of 3.11. In 1879 there were 254 confinements and eleven deaths, a mortality of 4.40. In 1880 there were 149 confinements and eight deaths, a mortality of 5.37. In 1881 there were 382 confinements and nine deaths, a mortality of 2.31. In 1882 there were 439 confinements and fourteen deaths, a mortality of 3.25. While some of these deaths were attributable to other causes, the great majority of them were due directly to hospitalism. For a few years past separate pavilions had been used for the lying-in patients, but the mortality had still continued large.

In the first three months of 1883, when Dr. Garrigues was himself in charge of the wards, there had been 108 confinements and no less than eleven deaths. During the six months of his service, from October 1, 1882, to the end of March, 1883, 192 women were confined, and of these forty-six, or about one in four, were seriously sick. Thirty-nine of the number, or about one in five, suffered from inflammatory puerperal disease. On the 1st of October, 1883, he again came on duty, and found the condition of the hospital much the same — nine patients having died within the past month, and several of the women being still very ill. In the meanwhile bichloride of mercury had come into notice as an antiseptic, and he resolved to give it a full trial; but at the same time he thought it well to adopt other precautionary measures in addition.

In the first place: he divided the hospital into two departments: one for the well, and the other for the sick, with separate physicians, nurses, and instruments. He employed rapid alternation in the use of the wards, and each patient was allowed to remain eight days in the pavilion where she was confined, when she was removed to the convalescent ward. The doors between the wards were kept locked, all chinks were filled up, springs were placed on the doors of the water-closets, and solution of bichloride of mercury used freely everywhere. As soon as a ward was vacated it was fumigated; twenty pounds of sulphur being burned for this purpose in the larger wards, and fifteen pounds in the smaller. When it was again occupied every piece of furniture was washed with a solution of the bichloride of mercury (one to 1000), and fresh bedclothes and new straw for the beds were provided. Large demijohns of the solution were kept standing in all the wards, and for the hands of the physicians and attendants it was used undiluted, except in cold weather, when a small quantity of warm water was added to it. For use about the patient's person it was diluted one half, very hot water being employed for this purpose in cases of post-partum hæmorrhage.

When labor was coming on the patient was given an enema and bath at first, after which at least two quarts of the bichloride solution were injected into the vagina by means of a fountain syringe. There was a large glass vessel, with which was connected a long rubber tube, at whose extremity was a straight glass tube for the vagina. When it was necessary to use intra-uterine injections a curved glass tube was employed. In tedious labors the vaginal injections were made every three hours. At the beginning of labor the physician and nurse were both required to wash their hands thoroughly with soap and water by means of a large nail-brush, after which they were to allow their hands to remain in the bichloride solution for a minute or more. In case of more than one patient being taken in labor at the same time, the hands were to be treated in the same manner before passing from one patient to another. No other lubricant than the bichloride solution was employed, except in case of operation, when glycerine was used with the solution; glycerine itself being a good antiseptic. When the child's head appeared at the vulva it was covered with lint wet with the solution, and after the expulsion of its body the genitals were kept carefully covered. The placenta was expelled by Credé's method. Intra-uterine injections were resorted to only in cases where it had been necessary to introduce the hand or instruments into the cavity of the uterus. No portion of the placenta or membranes was ever allowed to remain in the uterus, as it was considered safer to introduce the whole hand into the uterus, if necessary, than to run the risk of hæmorrhage or septicæmia from this cause. The curved glass tube used for intra-uterine injections was fifteen inches in length, and had a large opening at the end, while there were eight smaller holes at the side. It differed from the Chamberlain tube in having the orifice at the extremity and a greater number of holes at the side, while its calibre (a quarter of an inch in diameter) was considerably smaller. On account of its small size it could be used at a comparatively late period, when the os uteri had become considerably contracted. The opening at the end permitted the stream from the syringe to impinge directly against the fundus, and by means of the numerous holes at the side,

which were all within a distance of four inches from the extremity, the walls of the uterine cavity were thoroughly washed with the antiseptic solution. When used directly after labor it was held in position by means of the fingers; but if at a later period, and there were any signs of inflammation present, a Cusco speculum was first introduced into the vagina. If there were any diphtheritic deposit (which had hitherto been found very likely to occur at the Maternity Hospital), it could be thus seen to advantage, and the tube could be introduced into the uterus through the speculum.

After every labor the vulva was covered with a piece of lint six by eight inches folded lengthwise, so as to make its width three inches, and over this was placed a piece of oiled muslin nine by four inches. Over this again was placed a large pad of oakum; the whole dressing being kept in position by means of a piece of muslin eighteen inches square, with all its sides folded over, so as to form a kind of boat, which was then pinned securely to the binder in front and behind. This dressing was put on with the same special care that would be used in dressing a wound after a capital operation, and it was changed four times in each twenty-four hours. Before making the change the nurse was always required to use the precautions in regard to her hands alluded to above. When this plan was pursued preventive injections were unnecessary, and thus one of the greatest dangers from infection was avoided. During the eight days that the patient was in the lying-in pavilion no visitors were permitted to see her, and this rule extended even to clergymen, unless the patient were seriously ill.

Carbolic acid was used only for instruments, the solution of bichloride of mercury corroding the metal, and also becoming weaker itself in consequence. In two or three instances the bichloride had produced slight eruptions upon the skin, but in no case had the drug been abandoned on this account, and in no case had it produced any general symptoms. Some of the nurses complained of sore hands caused by it at first, but the difficulty was quickly remedied by the use of glycerine. The lochia were kept entirely sweet by it, and the use of the drug was always continued as long as the patient remained in bed.

As to the results obtained by the plan of treatment thus described, from the 1st of October up to the present time there had been ninety-seven women confined, and not a single one had died. Six had been more or less sick, but only one had been seriously ill. This was a case of eclampsia. Three cases of metritis and two of perimetritis made up the six. In two only had there been any rise of temperature, although some of the labors had been severe, including two versions and one craniotomy. Formerly, on the other hand, there had been more or less rise of temperature in from one third to two thirds of all the cases of confinement. In short the pavilions were scarcely recognizable now by those who had previously been familiar with them. Instead of being filled with foul air the wards were pure and sweet, the physicians and nurses were no longer overworked and anxious, and the patients were bright and cheerful instead of despondent and foreboding.

Bichloride of mercury possessed several advantages over carbolic acid, among which were the facts that it was a much more efficient antiseptic, and that it was an excellent deodorizer while being free from odor itself. It also affected the hands much less unpleasantly than carbolic acid. It might be objected to the paper, Dr. Garrigues continued, that the time during which the plan of treatment described had been tried had been too short to prove anything. But the change in the condition of the patients and the wards had been so sudden and so remarkable that he thought it could be attributable to nothing but this, and he believed that the same results could be continued indefinitely if the same attention to detail was maintained. The great factors in the success, in addition to this careful attention to detail, were the use of the bichloride of mercury and the exclusion of air.

DR. MURRAY was the first speaker who took part in the discussion which followed the reading of the paper. The latter had been especially interesting to him, he said, because he had been Dr. Garrigues' immediate successor as visiting physician to the Maternity Hospital. During the three months of his service there had been ninety-six confinements with fourteen deaths. Four of the fatal cases, however, were not due to the results of labor, so that the mortality from hospitalism was eight out of the ninety-six. The form of puerperal fever which had prevailed was very similar to that which had been met with in Bellevue Hospital about ten years ago, and was frequently characterized by diphtheritis. Puerperal peritonitis was very seldom seen. The diphtheritic deposits would commence at the vulva and gradually extend up the vagina, but rarely into the interior of the uterus unless the case were protracted as long as two weeks, when this result was liable to occur. The symptoms were not very well marked at the commencement of the attack, and the pulse did not often run above 100 during the first few days. Afterwards it was very apt to be intermittent. With the appearance of the diphtheritic deposit typhoid symptoms usually became developed, and in some cases the patients sank into a semi-comatose condition. In a certain ward the women almost invariably had diphtheria, and notwithstanding that it was disinfected as perfectly as possible the same result was noticed afterwards when it was reoccupied. When Dr. Garrigues came on duty he had the advantage of a new ward, which had not been used for a year, and this he thought might have had something to do with the results shown. When the lying-in wards had been in Charity Hospital it was always noticed that when a new ward was taken possession of there was a marked improvement for about a week. Still he questioned very much whether the immunity from mortality was due to this cause alone, and was disposed to give Dr. Garrigues full credit for the efficient system for the prevention of infection which he had inaugurated. In private practice he thought all this minute attention to detail was unnecessary, though the main features of the treatment might be carried out with advantage. Before concluding, Dr. Murray spoke of the inefficiency of carbolic acid in the treatment of puerperal diphtheria. As soon as the slight slough which was caused by its application had come away he had often noticed the diphtheritic deposit to spread to all the points which the acid had touched, and he had seen the patches appear just the same after patients had been actually cauterized with it.

DR. WYLIE referred to a paper which he had read before the County Society about six months ago, and said that he commenced to use antiseptics in midwifery when an interne of Bellevue Hospital in the year

1871. He attended thirty-six cases of confinement while serving in the lying-in department, and there was not a single case of puerperal fever among them. The only death that occurred was due to convulsions. He had observed the same measures in his private practice ever since, and had never had but one case in which there was a rise of temperature during the first few days after delivery. When there had been any febrile movement it had occurred after the eighth day, and had been due to mastitis. He was in the habit of washing out the vagina with a solution of carbolic acid of the strength of one to fifty, or more often of one to thirty, and also of carbolizing the bed linen; while he always insisted on having two sets of blankets and at least thirty-six napkins for the use of the patient. He would now try bichloride of mercury instead of the carbolic acid. In conclusion, he said that he could not agree with Dr. Murray in regard to there not being the same necessity for taking every precaution against the occurrence of infection in private practice. A physician might have the most uninterrupted success for a long time in his obstetric practice, and yet septicæmia at last make its appearance.

DR. GILLETTE stated that he had been connected with the maternity service on Blackwell's Island for twelve years, and that he had sole charge of the lying-in wards of Charity Hospital when the obstetric patients were transferred from Bellevue Hospital. For years puerperal fever had been epidemic at Bellevue, and all efforts to break it up had proved futile. At last the mortality became so great that it was determined to discontinue the lying-in service there entirely, and, accordingly, forty women were removed to Charity Hospital. They were all saturated with the influences that had prevailed at Bellevue, but under the counteracting influence of extraordinary cleanliness only one case of puerperal fever occurred among them. Nothing was known of Listerism then, and no special antiseptic treatment was employed except carbolic acid baths. He thought there could be no question of the importance of all the suggestions which Dr. Garrigues had made, but there might be some discussion as to the methods which he proposed. The latest germicide to attract attention had been the bichloride of mercury, and so at the present time everybody was expected to bow down to it, although he was not as yet convinced that it was of more value than some other antiseptics. In regard to Dr. Garrigues' vulvar dressing, he could see theoretically how it might do good, but practically he did not believe it was of any service, for the simple reason that it could not be kept in absolute contact with the parts to which it was applied, and, consequently, there must be plenty of room for the entrance of any germs that might be in the air. The great secret of the success which had been reported he believed to be perfect cleanliness, and he was also disposed, like Dr. Murray, to attribute it in part, at least, to the fact that Dr. Garrigues had commenced in a new institution.

DR. ALEXANDER T. HUNTER made some remarks, in the course of which he spoke of the superior advantages of the tube devised by Dr. George H. Lyman, of Boston, in cases where it was desirable to resort to intra-uterine injections; after which DR. BARUCH said that he was glad to hear the author of the paper speak against the use of prophylactic antiseptic injections after normal labor. For himself, he could only condemn them in the most unqualified manner. During the last twenty years he had attended about nine hundred cases of confinement, including every variety of complication, and had had but one death which was preceded by febrile symptoms. Even this one was not due to any septic influence. It was only since Dr. Wiley had read the paper before this Society to which reference had been made that he had tried the use of prophylactic vaginal injections, and he was sorry to say that his experience with them had not been at all favorable. In no less than six cases, in all of which the women were faithfully syringed, he had seen fever which was undoubtedly of septic character occurring in from five to eight days after delivery. He then went on to say that there was a distinct reaction against the use of such injections now taking place in Germany, and that they seemed to him to be objectionable on the following grounds: (1.) He believed that the lying-in patient ought to be kept as quiet as possible, and the injections interfered with this. (2.) It was impossible to give them without subjecting the patient to a certain amount of pain and exposure. (3.) Very few nurses know how to give injections properly. (4.) They were liable to displace clots and thus open avenues for auto-infection. (5.) They might also loosen adhesions. In his opinion simple cleanliness before, during, and after labor was all that was necessary.

DRS. F. V. WHITE, J. P. GARRISH, and J. C. PETERS then spoke, and DR. GARRIGUES brought the discussion to a close. In the course of his remarks he said that while one of the wards was new the others had been in constant use, and had previously contained many fever cases. There were three wards occupied by the lying-in patients in rapid alternation. The vulvar dressing had been devised with special reference to the shape and size of the parts to be covered by it, and he thought that if applied with proper skill it was efficient in excluding septic germs.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

THURSDAY evening, December 13, 1883. DR. J. H. MUSSER in the chair.

ENORMOUS HYPERTROPHY OF THE HEART (WEIGHING FORTY-EIGHT OUNCES).

CHARLES W. DULLES, M. D., reported the case.

The patient from whom this specimen was obtained was a young man, eighteen years of age, who came under my care in February, 1882, in an attack of muscular rheumatism, principally affecting the shoulders. I found at that time great oppression of breathing, a heart dilated and hypertrophied, with a harsh, strong, mitral systolic and presystolic murmur. His urine contained bile coloring matter, great excess of urates, great lack of chlorides and phosphates, and no albumen or sugar. In the sediments only amorphous urates were found. The treatment employed included the administration of infusion of digitalis, with iron and strychnia. At one time, believing it might benefit the violence I attributed to the real hypertrophy, I gave him veratrum viride. But it did no good. I did, however, get apparently good and prompt relief from some of the symptoms by the use of iodide of potash, in twenty-grain doses, thrice daily. After using this for a week, I noted in my case-book: "Sleeps well;

eats well; feels well; cough very slight; urine clear; pulse better; *cannot hear the old murmur* (perhaps barely); both heart sounds audible and pretty clear; action of heart fair." (It had been very tumultuous.) After six weeks of doing well the patient had a new attack of uneasy stomach, dyspnœa, and more or less cyanosis. On the night of May 10th he had a frightful attack of dyspnœa; I gave him one fifth grain of muriate of pilocarpine hypodermically (in the left arm), under the influence of which he sweated, but had no salivation. The next day he had a large œdematous swelling of the left side of his neck, below the jaw, and reaching to the middle line in front. This increased up to the evening, and gradually subsided in three days.

About this time fluid began to accumulate in the abdomen and thorax, and there was, of course, œdema of the feet and legs. There was also heard now a most beautiful water-hammer pulse over the femoral arteries below Poupart's ligament. The pulse here was intermittent and had a reduplicated sound like this . —, . —, . —, . —, etc.

Three weeks later another severe attack occurred, and again about three weeks after this. There were now in his urine considerable albumen and hyaline tube casts. When his attack came on, which was at night, I gave him one third grain of the muriate of pilocarpine hypodermically, which produced free sweating and brought out about two fluid ounces of saliva. His pulse came down from 140 to 100 in half an hour. But the dyspnœa abated only temporarily; the restlessness continued; the cyanosis increased; the respiration varied from 35 to 60 per minute; then his bowels moved involuntarily, his lungs seemed to fill up with œdema, and he died asphyxiated.

The autopsy was made the next day, with the assistance of Dr. Formad and Dr. J. H. Musser. The points of interest were as follows: General œdema of feet and legs; the face and neck and chest covered with purpura-like spots and patches. The abdomen contained about two quarts of clear serum; each pleural cavity nearly as much. The lungs were normal but small, and occupied the upper part of the chest. They were quite œdematous. The liver was slightly fatty, the spleen was of normal size, but very hard and tough. The kidneys were large, congenitally lobulated, and in a state of cyanotic hypertrophy.

The heart was enormously hypertrophied, weighing, when all the adherent parts were removed, forty-eight ounces. The pericardium was so uniformly attached to it that it could not be removed, and there was absolutely no pericardial cavity. The right ventricle contained about six ounces of soft post-mortem clot. The left side contained about two ounces similar. After the heart had been opened and well washed it weighed forty ounces. All the valves and blood-vessels were healthy. The tricuspid and aortic valves were quite competent. The mitral orifice was enormous — measuring two and a half inches across. Every part of the heart was hypertrophied, and all to about the same degree. The whole organ, which I here show, was about the size of that of a bullock.

The points of interest in this case — aside from the curiousness of the specimen — seem to me to be the comparative immunity of the kidneys; the absence of signs of adherent pericardium; the benefit derived from the use of iodide of potash; the temporary disappearance of the very strong mitral systolic and pre-systolic murmur; and the parotid swelling, following the hypodermic injection of pilocarpine in the arm of the same side. Dr. J. H. Musser remembered distinctly the case both before and after death. He had marked out on the chest the dimension of the heart and made it out as enormous, extending especially to the right. Furthermore, he thought that there was a double mitral murmur. The only apparent cause for the hypertrophy was the adherent pericardium. He would like to know what Dr. Henry thought of the correctness of this explanation.

DR. F. P. HENRY said that the heart presented was remarkable not only for its enormous size but also for the absence of the usual causes of cardiac hypertrophy, there being neither valvular disease nor obstruction in any part of the circulation. During his student days he had seen some very large hearts in the collection which Prof. Alonzo Clarke was accustomed to show to his class, but would not trust his memory so far as to affirm that any one of them was as large as the one just shown.

DR. MACCONNELL had seen a case in a member of the Modjeska troupe where post-mortem examination showed an enormously hypertrophied heart with adherent pericardium and markedly granular kidneys. In this case the hypertrophy was clearly due to the kidney trouble.

DR. FORMAD thought that Dr. Dulles' case was unique as to size. Dr. Robinson, of New York, had recently reported a case of hypertrophied heart, weighing fifty-six ounces, but Dr. Dulles' specimen was weighed after removal of clots, etc.

DR. MUSSER asked whether other members of his patient's family had not hypertrophied hearts without valvular lesions. If such was the case, taking into consideration the age of the patient, it would be well to consider the probability of the hypertrophy being in part secondary to the pericardial adhesions, in part idiopathic in origin.

DR. DULLES said that there was a tendency to hypertrophy of the heart in one sister, and that the murmur at times was double.

(To be continued.)

— In the duty of the medical journalist to welcome the coming, speed the parting guest, it falls to our part to chronicle the demise of the *Archives of Laryngology*, which we do with regret, and to announce the appearance of *The Analectic*, a new periodical designed to select and analyze the essential items of medical progress from the publications of this and foreign countries.

— *The Archives of Medicine* has also suspended publication after a satisfactory existence of five years. It is to be regretted that this journal, which has filled a valuable place in supplying purely original material to its readers, is obliged by a combination of extraneous circumstances to retire from the field.

— The *Illustrite Monatsschrift der ärztlichen Polytechnik* and the *Centralblatt der orthopädeschen Chirurgie* will hereafter appear as one publication.

— Mr. P. T. Barnum has been making a will, disposing, it is said, of some $10,000,000, and has called a number of physicians to give evidence of his mental soundness at the time of the execution of the instrument.

Medical and Surgical Journal.

THURSDAY, JANUARY 3, 1884.

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ANNUS MEDICUS INCIPIENS.

As last week brought the annual duty of summing up the medical events and results of the year which has just left us and contributing thus, it is to be hoped, to his euthanasia, so this week brings the no less periodical pleasure of wishing to our friends all they desire of good during the new year upon which we are all just entering. Hope, that best though delusive companion, is again starting trippingly on the journey as though she had never misled and even abandoned those who confided in her guidance; may vigor and perseverance be added to the company, enabling it to attack new questions and bring old ones to happy conclusions. There are plenty of dragons still to be slain, captives to be rescued, and rough places to be made smooth.

Were not the spirit of prophecy such a dangerous one to imprison in print, we might outline the present medical year as we have the past, at least in so far as the one inherits from the other.

Contributions will be made to the facts upon which the germ theory of disease is based, and the significance and scope of that theory will be somewhat more clearly defined. The Collective Investigation of Disease will be carried forward in England, on the Continent, perhaps in this country, and the methods by which the greatest advantage may be drawn from it will be gradually evolved. Both our own continent and that of Europe will be somewhat occupied next summer in guarding against any dangers from the relics of this year's epidemics of yellow fever and cholera, the present course of events in Egypt rendering a revival of cholera by no means improbable. Congress will discuss the value and functions of a national board of health, and, we will predict, while acknowledging the desirability of having a national board with a tolerably broad basis of representation, will leave the administration of maritime quarantine matters to the Treasury Department, assigning to a board of health the duty of pursuing and directing investigations of abstract hygienic problems which confront us as a nation and as individuals, and of making sanitary surveys. The possibilities and limitations of quarantine will probably in any case attract much discussion abroad as well as at home.

Congress will in its wisdom make an appropriation to provide the Army Medical Museum and the Medical Library of the Surgeon-General's office at Washington with a fire-proof building.

The medical societies of the different States will not allow the *Index Medicus* to become extinct.

Massachusetts will restore, or will prepare to restore, her Board of Health to its existence as a separate entity, and will simplify the organization of the complex body now known as the Board of Health, Lunacy, and Charity.

There will be a sharp contest in her courts and Legislature over the enforcement of the law to prevent the adulteration of food and drugs, in which the rights of the public to be protected will eventually prevail over the desire of the manufacturers to be rich.

The system of medical examiners obtaining in this State will receive favorable consideration in other States, warning the old coroners to withdraw.

In the domain of therapeutics the synthetic process in the chemical laboratory may have surprises in store for us.

We risk less in averring that medicine will again be robbed of some good followers, whose places will be taken by others now less known.

In the above short paragraphs sufficient prophetic hostages have been given to fortune. Should some of them fail to be redeemed we shall shelter ourselves behind the wish, which perhaps was father to the thought; and laying aside the prophet's mantle we revert in closing to the agreeable and certainly safer function of wishing all who journey with us a happy and prosperous new year!

LITERATURE IN MEDICINE.

THE profession of medicine is making progress by means of the constant study done in the laboratory, at the bedside and in the library, by a series of trained students and observers.

Laboratory work has accomplished so much for the good of the profession, and has assumed such importance in the eyes of educators, that there is danger lest work of other descriptions, not less important, should be under-estimated. "Original scientific work" is in the present day too apt to be considered the only claim to distinction, and that phrase is held to mean, almost exclusively, work in the physiological or chemical laboratory, and clinical and literary labors are apt to be under-valued if not despised. The propriety of such an attitude toward these latter methods of study is discussed in an address on the Place of Literature in Medicine by Dr. C. J. Cullingworth, Lecturer on Medical Jurisprudence in Owens College, Manchester, England, before a students' society of that institution. He intimates that the term "original" is not always appropriate as applied to such laboratory work, which consists in the carrying out of a series of observations and experiments under the direction of a teacher to whom is not only due the suggestion of a subject for inquiry, but also the laying down of the lines of the inquiry itself. Unless originality of thought on the part of

the worker himself is involved the phrase is open to objection. In the gentleman's opinion, while he is far from detracting from the value of researches which lead to even the slightest addition to exact knowledge, there is nothing in laboratory work itself as distinguished from clinical or literary work which gives it an exclusive right to be regarded as original and scientific.

Literary work may be as deserving of the designation *scientific* as any other, and of immense value to practical medicine. Not every man who contributes an article to a medical journal can be described as literary. Unfortunately our journals too often contain limited personal experience and hasty generalizations recorded with complete ignorance of what has previously been written on the same subject, but it is one of the functions of the literary worker to rescue from oblivion the valuable facts scattered through the voluminous literature of medicine, and render them by comparison and collation useful to the profession. To bring together unusual cases, to elucidate a symptomatology from the collected histories, to put the practitioner on the watch in regard to such cases, and mark out lines of future inquiry which shall enable the next man who meets with a similar case to complete the story, what more profitable work can be found for the student?

As a sample of such *scientific* literary work, the earlier editions of Bumstead's Venereal Diseases may be mentioned. The later editions were enriched more largely by his own observations, and deserve recognition for combined literary and clinical work, but of the first edition the author claimed only that he had collected into one volume, and thus rendered more accessible to the American reader, the investigations and results scattered through the pages of medical periodical literature in our own and foreign languages.

This is an extreme example of such work; it is ordinarily done on smaller subjects, and is peculiarly fitted to men at the very commencement of their career, when their experience at the bedside is as yet too small to justify them in drawing materials from it alone for contributions to medical literature.

As an assistant to such work Dr. Cullingworth speaks of the *Index Medicus*: —

"It is a remarkable example of American enterprise, and one can but feel deep regret that it has hitherto failed to obtain sufficient support to repay the cost of its publication. Recognizing the great loss it would be to medicine for such a publication to be discontinued, several of the medical societies in the United States have subscribed to a guarantee fund, from which the publisher, who for the first two or three years bore the entire risk, is for a short time to be recouped for any loss he may sustain by its continuance. I am glad to say that of all the towns in Great Britain, Manchester is the one which furnishes the longest list of subscribers in support of this enterprise."

In attempting to collate the facts recorded by others one constantly finds the most important facts omitted and generalizations added in abundance. "The great obstacle to the development of a science of medicine is the difficulty in ascertaining what cases are sufficiently similar to be comparable, which difficulty is in its turn largely due to insufficient and erroneous records of the phenomena observed. . . . Very, very few are the men who can, by and for themselves, see and describe the things that are before them. . . . We had to wait long before the man came who could see the difference between measles and scarlatina, and still longer for the one who could distinguish between typhus and typhoid." We fear many cases are lost to the world which would prove not only of paramount interest but of great value to the profession, through the modesty of men who hesitate to publish cases because of their inability to explain every symptom which has appeared. "The report of a case," says Dr. Billings, whom we have just quoted above, "in which every symptom observed and the effect of every remedy given is fully accounted for, and in which no residual unexplained phenomena appear, is usually suspicious, for it implies either superficial observation or suppression or distortion of some of the facts."

No one need despair, then, that laboratory experiment is not to their taste. The literary doctor has his uses as well as the more strictly scientific, if only he will learn to use his literary ability for the service of his profession. Diversity in preliminary medical education is certainly an advantage to the profession, as furnishing a class of men who are able to profit by and make profitable to all the work of the observer and the experimenter.

PERMISSIVE EUTHANASIA.

Among the queries made by the Poet at the Breakfast Table of the man of the fortieth century A. D. is one whether the euthanasia has become a recognized branch of medical science. The Journal has already noticed the assumption on the part of certain practitioners that a monstrosity should be put out of the way as soon as possible after birth, which proposal, though not (we are happy to say) generally "recognized," is in its measure a present realization of what the Poet thought a possible development of two millenniums. We now find in an exchange the frank confession of a physician on the frontier that he believes in and has acted on this principle in the treatment of an adult. The patient was a pauper, and was suffering from a serpiginous phagedæna which had destroyed the external genitals, and had spread into a large ulcer extending from the perinæum to the hypogastrium. He was alone, covered with filth and flies, dependent on the tender mercies of county commissioners, and apparently too weak to be moved to an almshouse. The reporter considered it his "duty as a conscientious physician," and in fulfillment of the "golden rule," to administer sol. Magendie ʒi., which succeeded in fulfilling the indication for euthanasia, *cito tuto et jucunde*.

Whatever the fortieth century may have in store for us, we believe that the profession is not quite pre-

pared for this teaching at present. We are not as yet ready to see the functions of Atropos added to those of Asklepios.* But, on the other hand, though we would never become destroyers of life, we suspect few physicians have escaped the suggestion in a hopeless case of protracted suffering to adopt the policy of *laisser aller*, to stand aside passively and give over any further attempt to prolong a life which has become a torment to its owner. For instance, a woman has malignant disease advanced far beyond the chance of operative interference. The odor is horrible, and not to be suppressed. Pain is intense. The stomach refuses its work. Fatal hæmorrhage momentarily threatens. For weeks the physician has combatted death at each of these points; has taxed to the utmost the art of the cook to appease the recalcitrant stomach; has crowded in food and stimulant by every channel, and all for what? to exhaust the strength and perhaps imperil the lives of the remainder of the household: to keep in their home a body which is repulsive to every sense and a mind which is no longer that of their friend, but which is overclouded if not maniacal; or, if the sufferer retains consciousness, to meet her bitter reproaches for prolonging her misery. Shall not a man under such circumstances give up the fight, take off the spur of the stimulant, and let exhausted nature sink to rest?

One of the most ghastly of Poe's tales is of a man whose soul was by some mesmeric influence kept in his body for weeks after the body was dead and decaying. The agony with which with swollen tongue and rattling voice he implores to be set free is vividly depicted, until at last the spell is taken off, and as the soul escapes the corpse collapses, "a loathsome, almost liquid mass of detestable putrescence." Even this emphatic language is hardly an exaggeration when applied to the bodies in which the physician sometimes fancies himself called upon to enchain for a little longer the struggling life. If the open upbraiding of the patient is wanting, the unspoken desire is often present to be delivered from this body of death. A garrison is brought face to face with inevitable surrender. The friendly general has not troops or supplies enough to relieve the besieged, and is perfectly aware of it. Shall he send in the pittance that can be introduced merely to prolong the garrison's suffering a few more days, when the surrender must inevitably be made?

Perhaps logically it is difficult to justify a passive more than an active attempt at euthanasia; but certainly it is much less abhorrent to our feelings. To surrender to superior forces is not the same thing as to lead an attack of the enemy upon one's own friends. May there not come a time when it is a duty in the interest of the survivors to stop a fight which is only prolonging a useless and hopeless struggle?

— The city government of Paris tested, during the month of November, the French wines brought into the market. Out of 1518 samples examined only sixty-five were found absolutely free from injurious adulterations.

THE DECISION IN REGARD TO THE PRIZE FOR ESSAYS ON MALIGNANT DISEASE, ITS CURE, AND THE METHODS OF INVESTIGATION TO BE FOLLOWED.

IN our advertising columns will be found the decision of the judges concerning essays on the subject of Cancer presented in accordance with an announcement made in March, 1882. The result is to be regretted. The subject, it must be admitted, was a difficult one, but so much the more surprising is the lack of serious and painstaking endeavor noticeable in the majority of the essays offered. We must confess, too, to some surprise at the absence of other than writers in the English language, for the announcement concerning the prize offer was extensively published in France, Germany, and Austria, permission being given to employ the French or the German as well as the English language.

The amount of the prize offered — one thousand dollars — was certainly sufficiently large to act as a spur to scientific zeal, and to have called forth a keener competition than is represented by the six essays which it is announced were received. Nineteen or twenty months was, moreover, time enough for serious preparation. There is no doubt that the benevolent proposer of the prize is not the least disappointed of those concerned.

MEDICAL NOTES.

— The Naval Advisory Commission has recommended the sale of the whole or the larger part of the Naval Hospital grounds at Chelsea, Mass. The cause is that the grounds are unnecessarily large, that they form an obstacle to public travel, and that they are too valuable to be kept longer from the market.

— A story illustrating the nutritiousness of the milk of the cocoa-nut is found in a daily contemporary. It seems that a vessel left San Francisco with four hundred passengers for Sydney, and, in consequence of running short of stores, put in at Samoa, where a large quantity of cocoa-nuts were obtained. The weather became so severe that the remainder of the passage consumed eight days, so that men, women, and children were reduced entirely to a cocoa-nut diet, and were obliged to be contented at last with but one per diem for each adult. "Notwithstanding this diet," says the report, "not a life was lost, and not a single case of sickness occurred, all the passengers landing in a healthy and well-nourished condition."

— The attorney-general of New York has begun suit at New York against the Eclectic Medical College of that city to annul its charter and dissolve the corporation. The attorney-general charges that the college has violated the provisions of its charter by issuing its diplomas in blank to enable persons not properly qualified to insert their names and illegally practice medicine.

— Dr. Robert T. Davis, member of Congress from Fall River, has been appointed on the Committee for Public Health. Dr. Davis's long experience on the

Massachusetts Board of Health should make him a valuable member of that committee.

— Frank Pere Lawrence, a member of the second class at the Harvard Medical School, died lately of pneumonia at the Massachusetts General Hospital, after an illness of about eleven days. Mr. Lawrence was an earnest student, and was highly esteemed by his classmates.

— Of Dr. Murray, who has lately been appointed Surgeon-General of the Army, the following incident is related: In 1850 General Sherman, then a young lieutenant, was stationed at Monterey. Returning thither on one occasion from a visit to San Francisco, he was attracted by the continuous crying of a child at a ranche on the road. He inquired the cause, and learned that the mother and her friends had done all they could for it, but as they were too poor to buy medicines or send for a doctor they had given up all hope and sat waiting for the poor little creature to die. As he was traveling under orders he had to push ahead with all rapidity, but on his arrival at the fort he related the incident with a great deal of animation and some pathos in the mess-room. Dr. Murray, then a young assistant surgeon, listened, with his heart in his eyes, and with the ardor of youth volunteered his services. He was given permission to go, and, hastily preparing for the journey, he rode *seventy miles* on his charitable mission. He was rewarded by the recovery of his patient, and the pleasure of reporting at the garrison the good news of his successful and unselfish enterprise.

Correspondence.

THE CLINICAL EXAMINATION OF DIABETIC URINE BY DUHOMME'S TEST.

MR. EDITOR, — There is no doubt that the quantitative method for dosage of diabetic urine, originated by Duhomme, and described by Dujardin-Beaumetz in a lecture published in this journal, November 15th, vol. cix., is the most expeditious and most handy yet known. Without claiming much experience in testing by this method, having had occasion to apply Duhomme's process to the examination of only two samples (from different patients) of saccharine urine, I am asked by several correspondents to clear up for them certain difficulties connected with the practical application of this test by physicians in this country. And first there is the disadvantage of not having the neat little apparatus of Limousin with the dropping tubes and all the other appurtenances. The most essential part of the apparatus is the graduated dropping tube (*compte-gouttes*), graduated at one cubic centimetre for urine, two cubic centimetres for Fehling's solution. These require to be very delicate, and easy of management. Those made recently by Codman and Shurtleff are a little clumsy in comparison with the "compte-gouttes" of Limousin. It is difficult with those of Boston manufacture to make the drops uniform or prevent the admission of air. I have lately obtained from Paris the apparatus of Limousin, and find the dropping tubes all that could be desired. I have no doubt that Codman and Shurtleff will be able in the future (with the samples before them) to furnish *facsimiles* of the French dropping tubes; with a little practice, however, one can obtain correct results with the tubes which this firm has already made.

With regard to the strength of Fehling's solution, this seems to be a matter of some importance. It should be of standard strength, *so that two cubic centimetres shall be exactly reduced by one centigramme of diabetic sugar*. I had a preparation made according to the formula given by Beaumetz in the November 15th lecture, except that for the neutral tartrate of potassa I substituted the tartrate of soda and potash (Rochelle salt). I find no difference between this solution and that of Limousin, which accompanied the saccharimetric apparatus.

As for the solution of soda, I do not think it makes any difference whether, in using Duhomme's process, you dilute the liquor Fehling (two centigrammes) with the solution of the French Codex or with the *liquor sodæ* of the United States Pharmacopœia. The main thing is to dilute the Fehling's solution with an equal quantity of an alkaline liquid. At the same time the preparation used on the Continent, a sample of which came with the Limousin package, is of specific gravity 1.14.

In a diabetic patient whom I am now attending, the proportion of glucose excreted in the urine continues almost a constant quantity. It takes just ten drops to redden the cupro-sodic solution. There are eighteen drops in each cubic centimetre. Referring now to Duhomme's table,[1] we find that there are eighteen grammes of sugar in each litre. This patient is now voiding sixty-four ounces or about two litres a day, hence is excreting rather more than an ounce of glucose.

The paper of Duhomme explaining the *rationale* of his process is too lengthy to be reproduced here. Suffice it to say that the method has been wrought out by patient and painstaking experimentation, and may be relied upon as accurate.

Yours truly, E. P. HURD, M. D.

NEWBURYPORT, *December* 24, 1883.

NOTE FROM DR. WEIR MITCHELL.

AT Dr. Mitchell's request we insert the following communication to the editor of *The Medical News*: —

SIR, — Will you kindly publish the following statement, made necessary because of my receiving letters from England and this country calling my attention to the liberty taken with my name.

Dr. H. H. Kane, of New York, has made use of my name in an advertisement of a secret means of treating the opium habit, and afterwards, in a pamphlet labeled De Quincy Opium Home Cure, printed fac-similes of letters received by him years ago from a number of physicians, and among them a letter of mine. In obedience to a protest on my part Dr. Kane has removed my name from his advertisement, and my letter from his pamphlet.

Yours truly, S. WEIR MITCHELL, M. D.

December 22, 1883.

[1] Vide JOURNAL, November 15th. It should be mentioned in this connection that the quantitative analytical process of the Harvard Medical School embodies the essential principle of the Duhomme method.

Miscellany.

REFUSION IN CARBONIC OXIDE POISONING.

DR. WILLIAM S. HALSTED discusses in the *New York Medical Journal* (December 8th) this method of treating cases when death is imminent from inhalation of carbonic oxide or illuminating gas. The practice consists in removing a quantity of the vitiated blood, and after defibrinating and oxidizing it restoring it to the body of the patient. He quotes a few authors who have mentioned this method of treating collapse from exsanguination, as, for instance, Volkmann, who suggested the feasibility of utilizing the blood which unavoidably was lost in an exarticulation of the hip. In carbonic-oxide poisoning refusion involves an additional factor, namely, the oxygenation of the poisoned blood employed; and is, therefore, an infusion of the purified, defibrinated, for the poisoned, entire blood of the individual.

Two cases are given at some length where refusion was practiced on individuals deeply poisoned by illuminating gas. In the first there was coma which had resisted previous treatment. Respirations were very superficial. The superficial reflexes feeble or absent; the deep ones not to be tested on account of rigidity of the limbs. The right radial artery was exposed above the wrist for about one inch, and two ligatures passed under it. This was at 10.50 A. M. The report says: —

"A canula introduced centripetally into the artery was held in place by one ligature; the other was used to occlude the vessel peripherally. Through the canula 512 cc. of blood were withdrawn, defibrinated, strained, and kept at a temperature of about 37.5° C. in a transfusion apparatus. 11.20 A. M.: temperature 35.4° C. (95.8° F.); pulse 22; respiration 22, full and dyspnœic. Superficial reflexes well pronounced. Eyes closed, but patient can be made to open them. Rigidity of limbs has in great measure disappeared. 11.32 A. M., 288 cc. of defibrinated blood, all that could be obtained from the 512 cc., were refunded through the canula in the artery toward the heart — centripetal arterial infusion. At 11.45 the injection was completed. Temperature 36.6° C. (98° F.); pulse 104; respirations 28, deep and labored. Superficial reflexes possibly exaggerated. The usual post-transfusion rigors lasted for half an hour. 12.35 P. M.: 300 cc. withdrawn, as before, through the canula, defibrinated and mixed with 128 cc. of defibrinated blood taken from another patient. One P. M.: temperature 38.2° C. (100.8° F.); pulse 128; respiration 28. 1.05 P. M.: patient's pallor most striking; 192 cc. of the mixed blood infused. The color returned rapidly to his face when from 80 to 100 cc. had been injected, the change from a deathly white to a healthy red taking place in a few seconds. 1.13: temperature, 39.1° C.; pulse 120; respiration 40. 2.30: temperature 39.4° C.; pulse 140: respiration 40. 5.20: temperature 37.8° C.; pulse 116; respiration 20.

"Patient has been gradually returning to consciousness since the first venesection, and now attempts to get out of bed."

The next day the urine was voided voluntarily, the patient ate well, and desired to go home, which he did fifty hours after admission to the hospital. No ill effects remained.

In another similar case the patient, a young girl, was growing gradually worse, despite all ordinary treatment, and ultimately her condition became, in the opinion of her attendant, hopeless. Then 204 cc. of blood were drawn from the left basilic vein, whereupon the condition improved marvelously, — the respirations becoming full, the pulse less frequent and stronger, the rigidity disappearing, and the reflexes returning. Here an attempt to refund blood to the system failed on account of imperfection in the apparatus, so that only 30 cc. were introduced. The fact that the improvement was coincident with the venesection and that there was really scarcely any refusion, renders it doubtful whether in the first case a similarly fortunate result would not have followed simple blood-letting. The good effects of venesection in such cases have been established by observation as well as by experiment on animals. Why then, it may be asked, transfuse if venesection accomplishes so much? It for no other reason, says the author, to allow of repeated venesection. The poisoned individual should be bled freely, unless there be decided contra-indications, even after, to all appearances, out of danger, in the hope of diminishing the risk of pernicious after-effects.

Although bleeding of itself will probably suffice to save life in almost all cases which occur in practice, it has been demonstrated by Kühne that animals, poisoned beyond hope of rescue by venesection, can be saved by transfusion. In one of his experiments, where respiration had been suspended seven minutes, he was still able to restore life to the animal by the infusion of defibrinated blood.

The theory of a substitution of corpuscles capable of carrying oxygen for those so vitiated as not to be capable of performing this function, though an attractive one, is negatived by the fact that saline injections are as efficacious as whole or defibrinated blood.

As to the various means of introducing blood, centrifugal venous infusion is at once rejected. So is centrifugal arterial injection in view of cases of gangrene so caused, and of rupture of capillaries due to the force necessary to overcome the vascular spasm. Of the two remaining possibilities the centripetal arterial is to be preferred to the venous because the blood by the former method courses more slowly and uniformly to the heart; because the minutest air-vesicle is retained in the capillaries; and because the danger of phlebitis is avoided. Moreover, arterial blood is thus most directly dispatched to the nerve-centres, in consequence of which the venous blood there contained is propelled onward into the veins, and the filling of the arterial system rejuvenates the feeble circulation by creating a considerable difference in pressure between the arterial and venous systems. The practical results of the author confirm those theoretical advantages of centripetal arterial infusion.

PARACENTESIS OF THE PERICARDIUM.

DR. J. W. MACDONALD reported to the Canada Medical Association (*British Medical Journal*, October 27, 1883) a case of pericarditis with effusion attendant upon acute rheumatism, in which he performed paracentesis. Thirty-two ounces of fluid were withdrawn, greatly to the patient's relief. A partial re-accumulation of the fluid was met by elaterium and counter irritation, and the patient subsequently did well.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 22, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	617	178	13.92	17.92	.80	4.12	1.12
Philadelphia	846,984	375	138	22.41	12.69	2.97	11.24	4.86
Brooklyn	566,689	236	77	13.44	16.18	.84	5.56	2.52
Chicago	503,304	236	110	28.14	10.92	5.46	11.76	5.04
Boston	362,535	193	55	17.68	15.08	3.12	11.44	6.24
St. Louis	350,522	135	60	25.16	8.14	1.48	14.06	3.70
Baltimore	332,190	166	63	23.40	12.60	1.20	11.40	.60
Cincinnati	255,708	—	—	—	—	—	—	—
New Orleans	216,140	137	35	27.74	8.76	1.46	1.46	—
District of Columbia	177,638	—	—	—	—	—	—	—
Pittsburg (1883)	175,000	59	25	27.20	6.80	8.50	12.20	5.10
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	39	21	23.04	7.68	5.12	10.24	7.68
Providence (1883)	116,755	38	10	7.89	15.78	2.63	—	2.63
New Haven (1883)	73,000	16	4	—	12.50	—	—	—
Charleston	49,999	36	17	8.31	11.08	2.77	—	2.77
Nashville	43,461	24	8	12.48	12.48	4.77	4.77	—
Lowell	59,485	24	6	20.80	20.80	12.48	8.32	—
Worcester	58,295	19	7	21.04	26.30	5.26	15.78	—
Cambridge	52,740	25	9	16.00	24.00	4.00	8.00	4.00
Fall River	49,006	11	6	18.18	18.18	9.09	9.09	—
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	16	0	—	18.75	—	—	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	4	0	—	50.00	—	—	—
New Bedford	26,875	6	1	—	33.33	—	—	—
Somerville	24,985	9	2	11.11	—	—	11.11	—
Holyoke	21,851	10	1	10.00	40.00	—	—	—
Chelsea	21,785	6	2	—	33.33	—	—	—
Taunton	21,213	7	0	—	28.56	—	—	—
Gloucester	19,329	3	2	—	—	—	—	—
Haverhill	18,475	7	0	28.56	—	—	28.56	—
Newton	16,995	5	1	—	40.00	—	—	—
Brockton	13,608	3	0	—	—	—	—	—
Newburyport	13,537	5	0	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	6	1	—	50.00	—	—	—
Fifty-eight Massachusetts towns	255,440	51	13	—	—	—	—	—

Deaths reported 2524 (no reports from Cincinnati, District of Columbia, and Buffalo): under five years of age, 852: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 477, consumption 350, lung diseases 282, diphtheria and croup 202, scarlet fever 65, typhoid fever 59, diarrhœal diseases 48, measles 35, malarial fevers 21, erysipelas 12, cerebro-spinal meningitis nine, small-pox eight, puerperal fever eight, whooping-cough seven, typhus fever three. From *diarrhœal diseases*, New Orleans 17, New York 13, Chicago five, Brooklyn and Boston four each, Baltimore two, St. Louis, Charleston, and Holyoke one each. From *measles*, Baltimore 14, New York 13, Philadelphia, Brooklyn, and Pittsburg two each, Chicago and Providence one each. From *malarial fevers*, New Orleans nine, New York and St. Louis four each, Brooklyn three, Chicago one. From *erysipelas*, New York five, Chicago three, Philadelphia and Boston two each. From *cerebro-spinal meningitis*, New York three, Chicago two, Philadelphia, Baltimore, New Orleans, and Nashville one each. From *small-pox*, New Orleans five, Philadelphia three. From *puerperal fever*, Chicago and St. Louis two each, New York, Philadelphia, and Brooklyn one each. From *whooping-cough*, Boston and New Orleans two each, New York, Brooklyn, and St. Louis one each. From *typhus fever*, New York three.

Six cases of small-pox were reported in St. Louis; diphtheria 51, scarlet fever 33, and typhoid fever 15 in Boston; scarlet fever 20, and diphtheria 11 in Milwaukee.

In the 73 cities and towns of Massachusetts, with an estimated population of 1,094,567 (estimated population of the State 1,922,530), the total death-rate for the week was 21.60 against 19.52 and 16.65 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending December 8th, the death-rate was 21.6. Deaths reported 3568: acute diseases of the respiratory organs (London) 448, scarlet fever 131, measles 98, whooping-cough 73, fever 59, diarrhœa 39, diphtheria 35, small-pox (Sunderland five, Birmingham four, Liverpool three, London two) 14. The death-rates ranged from 14 in Oldham to 32.8 in Preston; Bradford 16.6; Bristol 19.6; Sheffield 19.8; Nottingham 20.2; Leicester 21.4; London 21.5; Birmingham 21.8; Liverpool 23.6; Leeds 24.5; Manchester 26.1. In Edinburgh 17.9; Glasgow 23.5; Dublin 33.3.

For the week ending December 1st, in 169 German cities and towns, with an estimated population of 8,695,846, the death-rate was 23.4. Deaths reported 3913; under five years of age, 1763; consumption 535, lung diseases 445, diphtheria and croup 286, diarrhœal diseases 132, scarlet fever 85, measles and rötheln 84, typhoid fever 64, whooping-cough 58, puerperal fever 20, typhus fever (Stettin one) one, small-pox (Coblenz one) one. The death-rates ranged from 7.3 in Mannheim to 32.5 in Königsberg; Breslau 26.9; Munich 30.1; Dresden 27.2; Berlin 25.7; Leipzig 28.2; Hamburg 26; Cologne 22.7; Frankfort a. M. 16; Metz 15.1.

For the week ending December 1st, in the Swiss towns, there were 30 deaths from consumption, lung diseases 17, diarrhœal diseases seven, diphtheria and croup six, scarlet fever three, measles two, typhoid fever one, puerperal fever one. The death-rates were, at Geneva 12.3; Zurich 6; Basle 19.1; Berne 30.5.

The meteorological record for the week ending December 22d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall.	
Dec., 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 16	30.055	16	24	1	58	67	100	75	W	S	S	5	9	2	C	F	S	—	—
Mon., 17	29.803	20	24	16	100	95	89	95	N	NW	W	11	19	14	S	S	C	—	—
Tues., 18	29.997	30	38	13	84	83	77	81	SW	SW	SW	5	12	6	O	O	C	—	—
Wed., 19	30.276	26	37	21	62	100	100	87	W	N	N	4	12	17	O	S	O	—	—
Thurs., 20	30.413	20	24	18	85	72	84	80	N	N	N	13	10	6	O	F	O	—	—
Fri., 21	29.966	17	20	15	93	100	86	93	N	NW	W	10	16	7	S	S	C	—	—
Sat., 22	30.195	12	21	1	54	54	72	60	W	NW	NW	13	12	9	C	C	C	—	—
Mean, the Week.	30.101	20						82										48.30	2.40

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING DECEMBER 29, 1883.

GIHON, A. L., medical director. To the Naval Hospital, Washington, D. C.

RUSH, CHARLES W., passed assistant surgeon, U. S. S. Colorado. Granted sick leave for three months.

SUFFOLK DISTRICT MEDICAL SOCIETY. — The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, January 9th, at 7.45 o'clock. Drs. F. I. Knight, J. P. Oliver, and T. A. DeBlois will open the discussion upon Follicular Tonsillitis, postponed from the last meeting. Dr. G. Liebmann will present a paper upon Spinal Irritation and Neurasthenia. Drs. J. J. Putnam and S. G. Webber will open the discussion. Dr. A. N. Blodgett: The Voluntary Abandonment of the Morphia Habit. Exhibition of two cases.

ALBERT N. BLODGETT, *Secretary.*

ERRATUM. — A correspondent calls attention to the fact that we were in error in our editorial of December 20th last, p. 594, first column, in stating that Andrews was sentenced to the State Prison for life. The sentence was for twenty years.

APPOINTMENT. — Dr. W. L. Richardson has been appointed Visiting Physician at the Massachusetts General Hospital.

BOOKS AND PAMPHLETS RECEIVED. — A Treatise on Bright's Disease of the Kidneys. Its Pathology, Diagnosis, and Treatment, with chapters on the Anatomy of the Kidney, Albuminuria, and the Urinary Secretion. By Henry B. Millard, M. D., A. M. With numerous original illustrations. New York: Wm. Wood & Co. 1884.

A Treatise on Syphilis in New-Born Children and Infants at the Breast. By P. Diday, Ex-Surgeon to the Hospital de l'Antiquaillé. Lyons. Translated by G. Whitley, M. D., with notes and an appendix by F. R. Sturgis, M. D. New York: Wood's Library. October, 1883.

A Treatise on Pharmacy: Designed as a Text-Book for the Student and a Guide for the Physician and Pharmacist, containing the officinal and many unofficinal formulas, and numerous examples of extemporaneous prescriptions. By Edward Parrish. Fifth edition, enlarged and thoroughly revised by Thos. S. Wiegand, with 256 illustrations. Philadelphia: Henry C. Lea's Son & Co. 1884.

Étude sur la Pharmacopée des États Unis. Par C. Tanret, Pharmacien de première classe, lauréat de l'institut.

Des Fumigations de Parfums Trochiques Désinfectants. Par C. Tanret.

Étude sur les Extraits de Quinquina. Par C. Tanret.

Medico-Chirurgical Transactions. Published by the Royal Medical and Chirurgical Society of London. Volume 65. 1882.

Same. Volume 66.

Voice, Song, and Speech. A Practical Guide for Singers and Speakers, from the Combined View of Vocal Surgeon and Voice Trainer. By Lennox Browne, F. R. C. P. Ed., and Emil Behnke. With numerous illustrations by wood-engraving and photography. New York: G. P. Putnam's Sons. 1884.

Sixth Annual Report of the Trustees of the Danvers Lunatic Hospital. For the year ending September 30, 1883. Public Document No. 20.

Hints in Sickness: Where to go and What to do. By Henry C. Burdett, Founder of the Home Hospitals Association for Paying Patients. Author of Pay Hospitals of the World. London: Kegan Paul, Trench & Co. 1883.

The Operative Treatment of Intra-Thoracic Effusion. By Norman Porritt, L. R. C. P. Lond., etc., etc. Being the Essay to which the Fothergillian Gold Medal, 1883, was awarded. London: J. & A. Churchill.

Establishment of Tent Field Hospitals for the Treatment of the Wounded on the Field of Battle. By B. J. D. Irwin, Surgeon and Brevet-Colonel, U. S. A., Medical Director Department of Arizona. (Reprint.) 1883.

Ominous Symptoms in Typhoid Fever. By Charles R. Crandall, M. D., Portland, Maine. A paper read before the Portland Medical Club, October 18, 1883. Portland. 1883.

Observations on the Use of Bromide of Ethyl as an Anæsthetic for Short Operations, and as a Precurser to the Administration of Ether. By A. E. Prince, M. D., Jacksonville, Illinois. (Reprint.)

The Electro-Osteotome. A New Instrument for the Performance of the Operation of Osteotomy. By Dr. Milton Josiah Roberts. New York. (Reprint.)

New Operation for Rupture of the Perinæum Through the Sphincter. By J. Collins Warren, M. D., etc., etc. (Reprint.)

Transactions of the American Dermatological Association at the Seventh Annual Meeting, Held at Lake George, N. Y., August 29–31, 1883. Official Report by the Secretary, Dr. Arthur Van Harlingen. Baltimore. 1883.

Index to the Transactions of the American Medical Association. Vols. I.–XXXIII. Prepared by William B. Atkinson, M. D., Permanent Secretary. Philadelphia. 1883.

Relation of Eye and Spinal Diseases. By A. Friedenwald, M. D., Professor of Diseases of the Eye and Ear, College of Physicians and Surgeons. Baltimore. (Reprint.) 1883.

The Illustrated Christmas Number of the Publisher's Weekly, 1883. New York: F. Leypoldt.

Ophthalmia Neonatorum and its Prophylactic Treatment. By Walter P. Manton, M. D. Boston. (Reprint.) 1883.

Charlatanism in Colorado. By Jesse Hawes, M. D. Greeley, Colo. (Reprint.)

Annual Report of the Society for Instruction in First Aid of the Injured. October, 1883. Published by the Society.

Report of Cases treated in Ward XIX. of the Royal Infirmary, Edinburgh. Reported by Skene Keith, M. B., C. M. Edinburgh. 1883.

Elements of Surgical Pathology. By Augustus J. Pepper, M. S., M. B. Lond., F. R. C. S. Eng., etc. Illustrated with eighty-one engravings. Henry C. Lea's Son & Co.: Philadelphia.

Report of the Commissioner of Education for the year 1881. Washington: Government Printing Office. 1883.

Principles of Theoretical Chemistry, with Special Reference to the Constitution of Chemical Compounds. By Ira Remsen, Professor of Chemistry in the Johns Hopkins University. Second Edition. Revised and enlarged. Philadelphia: Henry C. Lea's Son & Co. 1883.

Lectures.

SYPHILIS OF THE BRAIN AND MEMBRANES.

LECTURE II.

A CLINICAL LECTURE DELIVERED AT THE PHILADELPHIA HOSPITAL.

BY H. C. WOOD, M. D.,

One of the Physicians to the Hospital, and Professor of Nervous Diseases in the University of Pennsylvania.

Gentlemen, — You will remember that when I last had the honor of meeting you we considered the subject of cerebral syphilis, with special reference to the disease as it affects the brain membranes. There is another form of specific disease of the brain which is much more rare. Cases of this form of cerebral syphilis are not often seen in the wards of a general hospital, but find their way into the insane asylums. I am, therefore, unable to illustrate my remarks by the presentation of a case, unless a brain which is now being removed from a man who died in the ward yesterday should prove to be the seat of this lesion. This man came into the hospital in a condition of absolute dementia. He was also partially paralyzed on one side. In the absence of any history it was, of course, impossible to make a diagnosis. The case, however, presented some of the aspects of the disease known as dementia paralytica, but later in the course of the lecture I shall bring the brain before you.

As I have said, I cannot illustrate my remarks by the presentation of a case, but in order to make the subject more complete I shall ask your attention for a few minutes to a consideration of syphilitic insanity dependent on disease of the gray matter of the brain. Sclerosis and atrophy of the gray matter are frequently found associated with disease of the membranes, and the cerebral symptoms which are present in disease of the membranes are always due either to primary or secondary involvement of the brain cortex or to derangement of its circulation. It is possible, however, for syphilis to attack the brain cortex without attacking the membranes. Under such circumstances the symptoms are not to be distinguished from the symptoms present in general paralysis of the insane. There is progressive mental failure, with a condition of depression, melancholia, or hypochondriasis, or with exalted delusions or mania, in which the patient thinks that he is the emperor, the czar, or that he owns millions, has great power, or strength, or, in some way, manifests the features of the *delire des grandeurs*. Then there is failure of muscular power, and fibrillar tremblings manifest themselves. The symptoms are sometimes not distinguishable from those of general paralysis of the insane, and it is often impossible in these cases to make the diagnosis from the symptoms alone. There may, however, be the evidences of syphilis of the membranes of which I spoke at the last lecture. If you have these you can make the diagnosis. But where the cortex is alone involved, it is not possible to determine the true nature of the lesion without a knowledge of the history or the aid of the therapeutic test.

At the last lecture I spoke of the therapeutic test of the existence of syphilis. Most of you know that this test consists in the power of the patient to bear mercury or iodide of potassium. In private practice it is my invariable rule never to ask questions in these cases. Persons are often unaware that they are suffering from syphilis. They honestly believe that they never had primary or secondary symptoms; these symptoms may, however, have been present, but so slightly marked as not to attract attention. Again, this is one of the points about which human nature often fails. People, even when death is staring them in the face, and their lives hang upon the truth, will make false statements. As we have a touchstone by means of which we are able to decide whether or not a patient is suffering from cerebral syphilis, I ask no questions, but apply the test where I have reason to suspect any disorder. It is a serious matter to mercurialize a patient, but it does no harm to produce iodism, so that when making the test I always employ iodide of potassium. If I find that ten grains three times a day produces symptoms of iodism I am almost sure that the case is not one of specific disease. If, on the other hand, the patient takes from one half to one drachm of iodide of potassium and waxes fat thereon, I am almost sure that he is the subject of specific disease. There are some persons, not syphilitic, who will stand large doses of iodide of potassium, but such cases are rare, so that when a patient will take half a drachm of the remedy three or four times a day it may be concluded that he is syphilitic. I say this with one reservation. Persons who have gradually accustomed themselves to the use of iodide of potassium, as, for instance, those who are asthmatic, will stand large doses of this drug, even when not suffering from syphilis. In such a case there will be the history of the long-continued use of the remedy. You must remember, also, that there is a syphilitic asthma, so that the relations of iodide of potassium to asthma are in many cases easily explainable. I shall speak of the method of using iodide of potassium when I come to consider the treatment.

It is important when employing iodide of potassium as a therapeutic test that you should be familiar with the symptoms of iodism. The most frequent manifestation of its constitutional action is the development of coryza, which exactly simulates that produced by cold. There will be dull aching in the temples, dependent upon congestion of the frontal sinuses, followed by a discharge from the nose, which is sometimes thick, but more usually watery, and often very free. In other cases, instead of coryza mild salivation is produced. When the salivation is severe the probabilities are that the patient has been taking mercury, and that the condition of the mouth has been produced by the liberation of the mercury which has been concealed in the tissues, for, as you know, iodide of potassium has the power of causing mercury which has been stored up in the body to take a soluble form. Sometimes an acne eruption is produced. Sometimes the eruption is of an ecthymatous character, while in other cases it takes the form of an erythematous dermatitis resembling erysipelas.

Before discussing the treatment of syphilis of the nerve centres I wish to say a few words in regard to the prognosis. Formerly when I took charge of a case of specific disease of the brain I always gave a favorable prognosis, but experience has shown me that sometimes such prognoses are not realized. Syphilis of the brain is a serious disorder, and in a certain proportion of cases you will fail to obtain the result you desire. The first element in the prognosis is the fact that because the symptoms are due to syphilis they are more amenable to treatment than if produced by any

other cause. Thus the fact that in any case insanity, palsy, or headache have a syphilitic origin makes them more amenable to treatment than if they were due to other causes. The prognosis must be guided by the manifestations in individual cases, but it always must be guarded. If a patient has severe hemiplegia, if the headache is severe, if the epileptiform attacks are violent, and if the history is that of long continuance, the prognosis is far more grave than if the nature of the disease is discovered at an early period of the attack. Even, however, in the most desperate cases almost complete recovery may be brought about by proper treatment. I remember reading in a London journal a short time ago the report of a case in which a man, absolutely paralyzed and demented, incapable of lifting hand or foot, and hardly knowing enough to have knowledge of his own existence, who in the course of a year or eighteen months was so far recovered that he won a rowing match on the Thames. Having made up my mind that the disease is specific, I tell the patient, no matter how severe the symptoms may be, "You have a chance for recovery." And however slight the symptoms may be I never say, "You are sure to get well." The proportion of chances, of course, varies with the extent of the lesion and the severity of the symptoms. It is a good plan to endeavor to put the prognosis in numbers. You make up your mind as to what you think the chances in his favor are, and then you tell the man, for instance, that he has three chances out of six. This satisfies him, and if he does not recover you simply say that he took one of the other three chances. It is related of a celebrated New York merchant that when on what he thought was his death-bed he asked his physician if he had a chance of recovering. The doctor told him that he had one chance out of a hundred. The merchant said that that was all right; he never wanted more than that in his business. He recovered.

Here is a patient whom I want to show you as a case of recovery. This man came into the ward two years ago. He then had severe specific basal meningitis with apparent implication of the brain substance. He had very marked oculo-motor palsy with ptosis and dilated fixed pupil on the left side. He had severe headache, great general weakness, and very little mental power. He had no epileptiform attacks. He suffered from a form of delirium which is seen in many of these cases, and is somewhat characteristic. During the day he would seem rational, but at night he would be dazed, not knowing what he did, and had a great tendency to get out of bed and wander away. When away from his bed he was unable to recognize where he was. It frequently happens in nervous diseases that the patient loses control of the sphincters, and passes urine and fæces in bed. In these cases of syphilitic disease this is not seen except in the last stages of the disorder. What we did see in this case was that the patient would go to a corner of the ward, and, supposing that he was in the water-closet, would void his excrement there. You see that there is an important distinction between these two conditions. In the one case the patient loses control over the rectum and bladder; in the other the patient does not recognize the position in which he is. Where you have this latter form there is always a suspicion arising that the disease is of a syphilitic origin. It is sometimes seen in general paralysis of the insane.

For several months this patient did not improve under treatment, but he is now almost recovered. The recovery is not absolute, and this happens in most instances of severe cerebral syphilis.

Here is a second patient who came in about two months ago. The disease was not so severe as in the previous patient, and it is probable that he will make a complete recovery.

In treating cerebral syphilis it is sometimes necessary to treat the symptoms, but the basis of the treatment is the use of antispecific remedies. If a patient has a violent attack of acute meningitis from cerebral syphilis, this is to be treated by counter-irritation or by bleeding, as may be indicated. If there is chronic or sub-acute meningitis or violent headache it is to be in part treated by the application of counter-irritants to the back of the neck and such other measures as are indicated; but although you do this you know that this is the mere frill, the *entrée* to the real courses of the dinner, and that the *pièce de resistance* is antispecific medication. There is no use of employing small doses in these cases; in order to cure the patient it is necessary to give large doses. This is one of the rare cases in which it can be truly said that the doctor effects a cure.

The question at once comes up as to the choice between iodide of potassium and mercury, and you will frequently find it somewhat puzzling to decide this point. Mercury is certainly more rapid than iodide of potassium, and when it is of great importance that the symptoms should be relieved at once, mercury should be used in preference to the iodide.

Some years ago I saw in consultation a tavern keeper in whom epileptiform convulsions had developed after he was forty years old. I diagnosticated cerebral syphilis, and he was put on the use of large doses of iodide of potassium. The fits grew less violent and came at longer intervals, and he was in a fair way to recover, and he would have gotten well, but one day he had a fit which stopped respiration a little too long, and he died. That man ought to have recovered, and he would have done so if it had not been for the accident of his death. If instead of giving iodide of potassium and being satisfied with a gradual improvement that patient had been mercurialized at once, the probabilities are that the fits would have been immediately reduced in severity, and he would not have died. You therefore see that we are to be guided to some extent in our choice between these remedies by the symptoms of the disease itself, leaving out of sight the condition of the patient. If the only manifestations of the disease are a little squint and a dilated pupil, we know that these will not kill the patient, and the slow action of iodide of potassium is sufficient. But where there are violent epileptiform attacks, or such a condition of the meninges that we fear the development of an attack of acute meningitis, mercury should be employed. In the great majority of cases it is sufficient to use iodide of potassium, but where there is any doubt, the administration of the iodide should be preceded by the use of mercury. Many combine these two remedies, but my own experience has not led me to have much confidence in this method. When the drugs are combined too small doses are usually given. If only ten grains of iodide of potassium are ordered, mercury should of course be given, but if one hundred grains of the iodide are given, I do not think that it is necessary to add to it one twelfth of a grain of the bichloride of mercury. If both are given at the same

time they should not be combined in the same prescription, for it is often desirable to push the iodide without increasing the dose of mercury. In regard to the amount given, my rule is to begin with small doses. If I am making the therapeutic test I begin with fifteen grains of iodide of potassium three times a day for a week. If a patient will bear this, he will in ninety cases out of a hundred bear sixty grains three times a day. In three or four days I increase the dose to twenty grains, and a few days later to twenty-five grains. If this is well borne, I make a bold plunge and give sixty grains three times a day. If the patient bears this the amount may be increased to eighty or ninety grains three times a day. If you want to cure cerebral syphilis there is no use in giving less than sixty grains three times a day. One half an ounce is not an excessive daily dose. This may be kept up for weeks, months, or years. How or why these large doses act better than smaller ones I cannot say, but I believe that iodide of potassium is one of the remedies that escape from the kidneys as fast as they are taken into the mouth, and do not accumulate in the patient's system.

In reference to the use of mercury, I do not think that it makes much difference how it is employed. It may be rubbed into the skin in the form of an ointment, it may be administered hypodermically in the form of the albuminate of corrosive sublimate, or it may be given by the mouth. If the mercury finds entrance to the system, it makes little difference by what door it goes through. If you want to impress the patient and do something that no one else does, of course you will use hypodermic injections, but these are apt to produce severe local soreness, and I do not think the effect is any better than when the drug is administered by the mouth. An important practical fact in regard to the use of mercury is that a mercurial course should always be followed by iodide of potassium. It is absolutely proven, to my mind, that mercury given for a long time does not all escape from the body, but finds its habitat in the solid tissues. I have seen patients mecurialized and recover, and when iodide of potassium has been given have a second outbreak of the former condition. In many cases, if the urine is examined no mercury will be found, but if iodide of potassium is administered, chemical tests will show mercury to be present. It should be made an absolute rule in all cases of syphilis to follow a mercurial course by a prolonged course of iodide of potassium.

The question always comes up in the treatment of syphilis, "How long shall the antispecific treatment be employed?" If you are giving iodide of potassium you can not continue the antispecific remedy too long. I think myself that in a severe form of cerebral syphilis the treatment should be continued for one, two, three, or four years after the subsidence of all symptoms. It is not then necessary to give it in such large doses as before recommended. Fifteen grains once a day is sufficient.

There are some cases of cerebral syphilis which will not respond to mercury or iodide of potassium. Under these circumstances the old treatment with the woods should be tried. A good form is Zittman's decoction. The compound decoction of sarsaparilla is the modern representative of mediæval decoction of the woods. I used to believe that these remedies had no power, and that sarsaparilla was a useless remedy. Although I now think that it is of service, I do not think that it is necessary in most cases of cerebral syphilis. In one case in which I failed with iodide of potassium and mercury, complete success followed the administration of Zittman's decoction. This preparation contains a small amount of mercury. The patient to whom I refer was a sea captain. I gave him iodide of potassium and I gave him mercury. He improved to a certain point, and then I could get him no further. In a moment of inspiration, or of desperation, I ordered Zittman's decoction. In a week the symptoms began to improve, and in four weeks he was able to return to his duties. The compound syrup of sarsaparilla is one of the few vehicles which has the power of covering the taste of iodide of potassium. In employing the iodide I order a prescription in which two drachms of the watery solution represents one drachm of the drug. I order the patient to add so many drops to one or two teaspoonsful of the compound syrup of sarsaparilla, or I administer it in the compound decoction of sarsaparilla. As iodide of potassium is prone to irritate the stomach, it should be given after meals, well diluted.

In this second patient we at first used iodide of potassium, but about ten days ago he was put on inunctions of mercury. These have been thoroughly carried out, and have produced a mild constitutional effect. He seems to have improved less under the mercury than he did under the iodide of potassium. We shall then resume the latter drug.

I shall now ask attention to the specimen to which I referred at the beginning of the hour. This is the brain of a man who was brought to the hospital on a stretcher ten days ago. The symptoms were those of complete dementia, but we had no history whatsoever. Three days ago he became unconscious; the temperature began to rise, and yesterday he died in a condition of apoplectiform congestion.

There is one point which I wish to refer to: that is, the rise of temperature. When in apoplexy, or apoplectiform conditions, the temperture begins to rapidly rise, the case almost always ends fatally. There is no symptom which has so fatal a significance as a rise of temperature accompanied with unconsciousness. The rapid rise of temperature indicates the destruction of so large an amount of nervous tissue, or tissue so situated, that recovery is next to impossible.

Looking at the specimen we find adhesions of the pia mater and exudations of small amounts of lymph on the upper surface of the brain. The under surface is normal, except that there is marked atheroma of the arteries. The arteries are thick, opaque, white, and feel like little round cords. This may depend on syphilis, and if the condition occurs in early life usually is so dependent; but as this patient was old, it may be simply the result of senile changes. Again examining the upper surface of the brain, I find, in the posterior lobe on the right side, a soft, discolored spot. I am sure that if some of this tissue were placed under the microscope numerous small, round cells would be found. This apparently is a gliomatous tumor of the brain. This consists of a tissue like sarcoma, with small, round cells infiltrating the brain tissue. There is no distinct line of demarkation separating the growth from the normal tissue. To the naked eye it differs from the normal brain structure only in color and consistence. On opening the right lateral ventricle I find it filled with serum. The left ventricle is empty. As I have said, I believe this to be a case of gliomatous tumor associated with secondary serous apoplexy.

Original Articles.

A CASE OF CEREBRO-SPINAL SYPHILIS.

BY ABNER POST, M. D.

THE following case is presented with the knowledge that it is imperfect, but with the hope that it may prove as interesting to the reader as to the observer: —

J. D., aged thirty-one, Irish-American, of healthy family, and in general well until present trouble. Previous to March 31, 1867, served three years in the regular army, the latter portion of the time as corporal, — important matters of his personal history, as they establish the fact of physical soundness and of ordinary mental capacity.

After leaving the army John led an irregular and useless life; drank very freely, and was in general very dissipated. Had several gonorrhœas, and at some time not easily fixed, probably in the latter part of 1869 or early in 1870, had a venereal sore, followed by a bubo which suppurated and remained open for a year.

This was followed after a time by lumps in the throat and a falling of the hair. He did not consult a physician at this time, but applied nitrate of silver to the primary sore, cut his hair short, and took iodide of potash at the advice of a friend. He says he never had any eruption save a few pimples on his arms. Something, however, sent him once to the dispensary, and he took the contents of a bottle given him there. If he is to be believed the manifestations were very slight, and the treatment was certainly very imperfect. He was now for three years a barkeeper at the North End, and drank more freely than ever, being drunk by his own statement about half the time.

In the spring of 1875, or about six years, as nearly as can be ascertained, after the primary sore, he began to have dull remitting pains in various parts of his body. During the summer he was attacked on five or six occasions with a sudden sharp pain in the small of the back, which seemed to be drawing him backwards and compelled him to lie down to keep from falling. Each attack was of short duration; there was no loss of consciousness nor headache. He noticed after the commencement of the pains that he was dragging his right foot in such a manner that he wore out the tip of the right shoe. He lived at home at this time and was probably temperate, but his walk was so irregular that the boys on the street would cry out that John was drunk again. During this time, and probably before the commencement of these latter symptoms, he had some difficulty of micturition.

In November of the same year, 1875, the following note of his case was made by a physician who saw him: "Intellect below par; eyes dull, expression sleepy; gait labored, shuffling, slightly irregular; inclined to drag right toes; with difficulty stands on one foot with closed eyes; can turn round fairly; sensation in foot normal; slight incongruity of speech. Pulse 75; temperature 99° F. Urine contains no abnormal constituents." The patient is reported as saying that he had noticed a change in his own voice; words were thick and cut short, and he talked "through his nose."

Soon after this record he visited a sister in the country. One morning, after talking with the family until after ten o'clock the preceding night, he was unable to rise and his speech was unintelligible. In the afternoon he was encouraged to get out of bed, but was unable to stand and fell to the floor. In a day or two, however, he was able to return alone to the city. Nothing could be learned as to the extent of this attack or what members were involved.

He was treated for more than a year at various places, gaining slightly at times, but on the whole with no great benefit, and at last with marked failure. At one time his right arm became powerless, hanging helpless by his side; he regained partial control over it after a time, however.

Was first seen by the writer in the winter of 1876–1877. When first seen he was dressed and sitting in a chair, but was unable to hold himself upright in it; he could with difficulty stand erect for a moment without support; he could walk across the room when supported, dragging both feet, noticeably the right; tottered, and was easily upset. His grasp was very feeble, weaker on the left side than on the right. His mother dressed and undressed him, put him to bed, and fed him. On the preceding night he had fallen out of bed and was unable to return to it till assisted. He had entirely lost control over his sphincters. His countenance wore a vacant expression or a meaningless smile. His speech was thick, not easily understood. All answers to questions were followed by an idiotic laugh. There was a constant flow of saliva. His memory for the principal events of his life was good, and he could generally answer any question requiring a simple yes or no, but he was incapable of any mental effort. He could not give his age, but was very bright in his answers to questions for specific history.

Much of his time was spent in reading newspapers, which he comprehended, at least partially; but he could not repeat sensibly a single item. There was no delirium nor hallucination.

His tongue was protruded in a straight line, and no paralysis of facial muscles existed. There was no loss of sensation noticeable by ordinary methods of investigation. There was no wasting of separate muscles, and no tremor. A very slight cicatrix could be made out at the seat of primary sore; an irregular puckered cicatrix in right groin; aside from these no cicatrices; no enlarged glands; no nodes.

The irregular and progressive character of the paralysis, its union with dementia, in a patient of thirty-one, of probable syphilitic antecedents, made the diagnosis of cerebro-spinal syphilis nearly if not quite positive, and treatment was instituted in accordance with that view.

His improvement was almost immediate, and to a certain point rapid. In a few days he regained control of his sphincters and was able to dress and feed himself; his powers of locomotion returned more slowly, and he continued very silly. He became exceedingly restless, and as soon as he was able to go out of doors would spend the whole day from home, wandering as far as his strength would allow, returning always punctually at meal time.

Soon after he began to walk about the pain in the lumbar spine returned with great violence, and for a few days he walked with his back deeply curved — an opisthotonos — using his cane apparently to prevent falling backwards. His iodide was increased, and this symptom lasted but a few days, when he resumed his former position, still dragging his foot, his mental state improving little if any. What symptoms accompanied this condition of the spine are unknown, as during this time he was never found at home but only seen accidentally as he was walking upon the street.

During the summer he was seldom seen; he continued to take iodide, but irregularly, at times ceasing for a few days altogether. In the autumn he returned to treatment in about the same state as when last seen. He had had no further attack, but had made little if any improvement. He was put upon iodide again, beginning with fifteen grains three times a day, running up rapidly to half a drachm, and more slowly to one drachm.

On the 1st of January, 1878, he dragged his right foot for a few steps, and then raised it for a step. His intellect was somewhat clearer, he answered sometimes with the usual idiotic laugh, and sometimes in a more natural manner.

In the middle of January his laugh was still less marked. An acneform eruption existed on the face.

Dr. Wadsworth was kind enough to make an ophthalmoscopic examination of the patient for me, which was negative so far as symptoms of intra-cranial disease were concerned; he however found evidence of an old iritis in right eye of probable syphilitic origin. The following is his account: —

January 17, 1878.

Dear Doctor, — I examined the man you sent me yesterday. I found in the right eye evidence of former iritis and appearances about the optic nerve which may have been the result of an old optic neuritis or may have been congenital. The left eye was hypermetropic to a considerable degree, and, as he says it has always been, amblyopic. There were no evidences of disease to be seen in it.

The imperfect sight in the left eye I am disposed to believe connected with the hypermetropia, and both congenital.

If the appearances seen about the right optic disk are the result of former inflammation, I should rather regard that inflammation, here, as connected with the iritis which he certainly has had, than as a symptom of organic cerebral trouble. If neuritis were excited by the latter it would most probably affect both eyes. The iritis was probably specific.

I should call the result of my examination, so far as it bears on the existence of organic cerebral trouble, negative.

Very truly yours, O. F. Wadsworth.

Under date of , 1878, the following account appears: —

"At present he presents a most marked contrast to his former state. He drags his foot, but not so heavily as before, occasionally raises it for a few steps, especially if walking on a level floor. His eye is quite bright; he can talk for several minutes without the vacant laugh showing itself; he can write very intelligibly, probably as well as he ever did. He announces that "he feels better; that his mind is not troubled any longer," and that he could do almost anything he ever did. He remembers perfectly events previous and subsequent to his sickest time, but cannot believe he was ever unable to feed himself. Has noticeably improved within the last fortnight."

In regard to diagnosis the points particularly noticeable are the youth of the patient, the disorderly grouping of the symptoms, and particularly the evanescent and imperfect character of the paralyses, and the necessity of supposing various lesions, widely separated, as points of origin for the various symptoms. Such a history is very unusual, save as a result of syphilis, and even if the history of early symptoms were more imperfect than in the present case or entirely wanting, no other diagnosis would be admissible; the rapid though partial improvement confirms it.

An interesting point in the history of this case is the entire absence of headache and sleeplessness. Pain in some portion of the head of a very severe character is supposed to be an almost invariable precursor of cerebral symptoms. It is usually continuous, seldom intermittent, and usually without nocturnal exacerbations. Neither the patient nor his friends have the slightest recollection of its ever occurring, though questioned repeatedly in regard to it.

The pain over the lumbar spine was, however, one of the earliest symptoms; its severe character was the same as that usually ascribed to the cephalalgia, and may well supplant it as an early symptom.

The case unites three of the causes usually considered influential in determining cerebral symptoms in syphilitics: —

Poorly marked secondaries.

Irregularly followed treatment.

Irregular, dissipated life.

The first two antecedents may to a certain extent be considered identical. The slight severity of the symptoms being the reason why patients are unwilling to carry out the details of a specific course. That debauchery, and particularly the free use of alcohol, should tend to the location of syphilis in the nervous system seems but a natural result. It is the cause oftentimes of various nervous manifestations in other diseases, it renders the nervous system sensitive to outside influence, and exactly as syphilis often manifests itself at the seat of an old injury in the skin and bones, so it may tend to locate itself in a brain injured by the repeated hyperæmias of free alcoholic stimulation.

Hereditary predisposition to nervous diseases is also one of the determining causes, and it may be interesting to note that the patient's father, during the latter years of his life, was "nervous," according to his wife's story, that is, restless and irritable, less able to apply himself to his ordinary occupation than previously. These symptoms came on after, and were referred to, a blow on the head.

The dose of the iodide under which the first striking improvement was made is quite uncertain; a misunderstanding took place in regard to its administration; it fell far short of the enormous doses often necessary in cases of this character; it probably never exceeded fifteen or twenty grains three times a day. To it was added for a time a small dose of mercury; it was soon suspended, however. When the patient returned to treatment in the winter the dose was run up slowly from fifteen grains to one drachm three times a day, which he is now taking. There is little doubt in my own mind that had he taken at first the amount he was supposed to be taking the improvement would have been far greater.

His appetite was good throughout. No symptom of iodism appeared, save a few acne pustules on the face. The continuance of the very noticeable flow of saliva was suspected to be due to the iodide, but it markedly decreased during treatment.

The actual improvement made in the patient's condition almost surpasses belief. The long time that elapsed before he received continued specific treatment, and its insufficient character for some time after it was entered upon, certainly allowed sufficient time for permanent injury.

Of the later history of this patient I am able to give but little account. He remained in about the same general condition, never recovering sufficiently to assume again his position behind the bar, and finally died, probably some time in 1880. Of the particulars of his death I have no knowledge.

AN UNUSUAL OBSTETRICAL CASE.[1]

BY CHARLES P. STRONG, M. D.

THE case I bring to your notice to-night has its interesting features in the complications attending the confinement of a healthy primipara of thirty; these were: prolongation of the pregnancy and large child, entire absence of liquor amnii, interstitial and subserous fibroids, contracted pelvis combined with posterior position of the occiput, and non-rotation of the head; a list as formidable as it, fortunately, is rare.

Prolongation of pregnancy. Fortunately there is no possible cause for doubting the honesty of the patient's statement that menstruation was last observed September 17, 1882, and that impregnation must have taken place within the five days subsequent. Allowing the usual time of 278 days from the last appearance of the menstrual flow to indicate the time of delivery, June 22, 1883, was considered the probable date. There were, however, no signs of uterine action until July 10th, 296 days after the cessation of menstruation, and these were but false pains, and it was not until July 18th, 304 days from the end of the last period, and 299 days from the last opportunity for fertile coitus, that labor began. The influence of this prolonged period of gestation was undoubtedly manifest in the large size of the fœtus, eleven and one quarter pounds; but whether the absence of liquor amnii was cause or effect of the prolongation, or whether there was no relation between the phenomena except that of coincidence, I am unable to determine.

To abbreviate the account of the labor, let me state that the first thirty hours were occupied by irregular and infrequent, short, nagging pains, ineffectual in dilating the os much or rapidly, nor did they exhaust the patient, as she enjoyed the rest which chloral gave. The results of my first examination as noted were: First, the peculiar shape of the abdominal swelling. It was not a moderate curve from pulse to sternum, but hung pendulous, the umbilicus crowning the summit, like the tumor found in multiparæ with lax and ruptured abdominal walls. Though a tense, hard uterus, the position of the fœtus was made out with more uncertainty and difficulty than I ever before experienced, but I was sure the head was against the pubes, and the occiput in the right posterior position. The body it was impossible to locate, and, complicating still more, a hard mass the size and shape of a fœtal head could be felt in the median line just posterior to the uterine fundus, evidently imbedded in the walls of the uterus or else in its cavity. The question that these abnormal results of palpation offered was: were there twins, a monstrosity, or uterine fibroids to complicate delivery? With most careful auscultation I could find but one fœtal heart, beating most loudly on a level with, and just to the right of, the umbilicus, which made the existence of twins more problematical. By the vagina the head was felt presenting high up, the os just admitting the tip of the finger. As I stated before, there was no material change in this condition of affairs for some thirty hours; then the pains assumed a better character, and, the os slowly dilating, the head descended, pushing in front of it the anterior lip, which no efforts could keep replaced above the smooth brow, but which, happily, was not made at all œdematous by the pressure. When the os was dilated the head, although extended, firmly engaged, but in a curious manner, the brow jamming hard against the pubes, while the occiput was so far from the sacrum that the finger could easily be passed between them. So long as the pains continued to be effectual, although the progress of the head was very slow, I refrained from any interference to aid the occiput in rotating forwards, but when, with strong pains, there had been no advance for some time, I employed all manual means, pressures upon the forehead, attempts to bring down the occiput and the like, endeavoring thus to obtain better flexion to accomplish this end. No efforts on my part, nor the vigorous pains of the patient, could stir the head from the position it had then occupied for nearly an hour, and, realizing that a bladder slough must ensue unless a speedy termination was made to this localized pressure, I decided to etherize and deliver; but wishing first the advantage of a consultation, I summoned Dr. J. B. Swift, whose advice and manual assistance contributed largely to the happy termination of the case. Palpation under ether revealed the existence of but one fœtus, and the presence of large inter-uterine and subserous fibroids. The head was undoubtedly in the right posterior position, but the fœtal body was still obscured by the tense uterine walls. There seemed no reason for the non-advance of the head, except absence of rotation, and I hopefully applied the forceps with the idea of flexing the head and turning the occiput forwards, but in several trials failed to lock the blades, and, introducing my hand to ascertain the cause, came upon the too projecting promontory of the sacrum, between which and the pubes the head was caught, lying with its bi-parietal diameter in the narrowed antero-posterior diameter of the pelvis. As the forceps would not lock, version was attempted, and our united efforts succeeded in dislodging the head back into the uterus, turning and extracting, the most difficult part of the operation being to draw the body through after the feet were down, and the continued pressure upon the cord at this time is probably responsible for the birth of a fœtus whose heart was but feebly fluttering, and who, despite immediate attention, never breathed. The entire absence of liquor amnii permitted the uterine walls to mould themselves closely to the fœtal limbs, thus vastly increasing the tediousness and danger of version. The perinæum required no stitch.

Following down the uterus as the head was extracted I could force the fundus no lower than two inches above the umbilicus, and I introduced my hand, removing the placenta, completely into the uterine cavity before I could convince myself it did not contain another occupant, and that its size depended only upon the fibrous growths which extended throughout the posterior wall from the cervix to the fundus. The uterus was bulky as normally at the seventh month of pregnancy, and the mass that I had thought might be a fœtal head projected boldly from the fundus as a subperitoneal fibroid. Hæmorrhage, which I anticipated, fortunately did not occur. I administered a full dose of opium, and ordered the patient to be kept under its influence thoroughly.

The following day the patient had but slight tenderness over the abdomen, but the vulva was so swollen the legs were kept widely apart. Vaginal douches of carbolic were given for the lochia were already offensive, and ergot and quinine prescribed. Opium was continued to just short of narcotism. On the second day the uterus was still far above the umbilicus, the

[1] Read before the Section for Obstetrics and Gynæcology of the Suffolk District Medical Society, October 17, 1883.

lochia very copious and offensive, and about the perinæum and vagina sloughs appeared, especially deep on the perineal body. Abundant nourishment was taken. There was no material change until the fourth day, when the breasts, filling, were strapped. While the evening douche of carbolic, one to forty, was being given the patient suddenly collapsed profoundly, necessitating stimulants subcutaneously; immediately following was a prolonged chill, the temperature rose to 105.6° F., the lochia became very offensive, and a case of septicæmia seemed well started, but during the night all these bad symptoms disappeared, and the patient expressed herself as feeling better than at any time since delivery. The lochia, although profuse, were not offensive; the right labium was rapidly returning to its normal size; the sloughs had cleaned away and left granulating surfaces on perinæum and vagina. The left labium contained a hæmatoma the size of an orange, but day by day this diminished, and in six weeks entirely disappeared. On this day I substituted chlorinated soda for carbolic in the douche, and commenced to wash out the bladder for cystitis, a cystitis undoubtedly of traumatic origin. Three times during convalescence the copious lochia were stained with blood, and once the urine for five days was very scanty and dark, but contained no evidence of renal disease. Apparently this was an idiosyncrasy of the patient, for the same phenomenon was twice noticed two years ago when she was ill with acute rheumatism, and her urine then submitted to experts failed to show the cause. With these exceptions convalescence was uninterrupted. The uterus slowly involuted, and at the end of two months was but little above the pubes. Opium was omitted at the end of ten days, but ergot was retained, and materially aided in reducing the bulk of the fibroids.

The hæmatoma of the left labium, a lesion fortunately rare, and, unfortunately, not always as happy in its termination, was undoubtedly due to the sudden over-distention of the vulva by the passage of the large fœtus, and to the same cause I attribute the sloughs which appeared on the perinæum and vagina. The method of checking the milk by strapping the breasts firmly as soon as they began to fill, padding freely with cotton to secure uniform and elastic pressure, I regard as much more effectual and speedy than rubbing.

In conducting the convalescence no consideration perplexed me more during the first few days than that of the necessity for an intra-uterine douche which the very offensive lochia indicated. I determined against it for these reasons: Nothing in the general condition of the patient imperatively demanded it. The uterus was free from tenderness and the lochia so profuse I felt sure none were locked up in the uterine cavity, especially as I knew the placenta and membranes were thoroughly removed. The danger to my patient lay not so much in septicæmia as in peritonitis, and it seemed to me that the trying operation of washing out through the swollen and sensitive vulva, requiring, too, as it does, so much manipulation of the patient, would be provocative of far more serious trouble than it would ward off. The chill and high temperature on the fourth day might possibly have been due to the coming of the milk, and the antecedent collapse but a coincidence, but I am more and more inclined to attribute the entire disturbance to the entrance of some of the carbolic solution into the uterus. Since the intra-uterine douche and carbolic acid have grown into such general favor, every year shows an increasing record of cases of collapse, sometimes fatal, during its employment, this, too, notwithstanding the varied and complete armamentaria that abound in our surgical stores. With other disinfectants thus employed I never personally saw these unpleasant results, nor am I familiar with recorded cases. During my service as house officer at the Lying-in Hospital when intra-uterine douches were there first introduced, a solution of permanganate of potash was always employed, and in two severe epidemics of septicæmia where ten and more douches were daily given with no other instruments than a block-tin tube passed to the fundus and a Davidson syringe, there was never a bad symptom produced. I believe permanganate of potash is, above all others, the proper disinfectant for intra-uterine medication; the color of the returning fluid shows when the cleansing is complete, a very important consideration, because if done at all disinfecting needs to be thoroughly done; it does not produce colic, cramp, or systemic poisoning; the ensuing fall in temperature is more decided and protracted. I should always use it in vaginal douches, too, were it not that it stains the linen; for this class of cases a solution of chlorinated soda is most efficient, but the tendency of the latter disinfectant to form with pus a tenacious, semi-solid mass prohibits its intra-uterine use in sufficiently strong solution to be reliable.

The subinvolution of the uterus that persisted so many weeks is certainly explained by the presence of the fibroids, which acted not only passively by increasing the mass to be disintegrated, but even more potently retarded the retrograde changes by the reflex action of a foreign body in the uterine walls.

With the success of the early establishment of opium narcotism I am perfectly satisfied. The danger where so much manipulation is employed is not of septicæmia, especially if hands and instruments have been rendered aseptic, but of peritonitis. We have no other remedy to combat the inflammation when once established, and if checking peristalsis offers the one means of cure, checking it earlier rationally appears the one means of prevention.

The exhibition of ergot was continued two months, yet when I last examined the patient, eleven weeks after delivery, the cavity of the uterus measured two and three fourths inches, and the posterior wall and fundus were still thickened and irregular, although the projecting knobs that were so apparent immediately after labor had melted away.

To allot to each abnormal element its proper share in producing the complications of this case is impossible. Had any one of them existed alone a tedious labor would probably have been the worst result, but here it was demanded of a weakened uterus to force an excessively large fœtus, lying in an unfavorable position, through a contracted pelvis. Fibroids, wherever situated, tend always to produce trouble, the submucous ones especially predisposing to hæmorrhage. They impede the uterine contractions, frequently cause abnormal presentations, and during convalescence may threaten life by sloughing *en masse*, or, disintegrating more slowly, be absorbed and produce ichorrhæmia, a condition the prolonged elevation of the temperature shows was present in this case. In two previous cases where I observed this complication, the fibroids being of the subserous class, irregular and weakened uterine

action was the result; in one case forceps were required.

Reviewing my patient's symptoms I see that I might sooner have suspected pelvic deformity had there not, unfortunately, been so many other visible explanations of all irregularities. The pendulous abdomen, the malposition of the head, high up, and extended, with the brow pressed hard against the pubes, are all characteristic of this class of pelves, which Schroeder calls flattened pelves. They are produced by the sacrum being thrust forwards and downwards in youth, thus confining the narrowing to the antero-posterior diameter. The deformity is rarely marked enough to produce much trouble except in cases similar to the one under consideration, where there is relative disproportion between the diameters of the pelvis and a large fœtal head. It is in this class of cases that forceps often fail in consequence of the firm wedging of the head, in its wide bi-parietal diameter, between the pubes and the projecting promontory. Version offers far better prospects for speedy and safe delivery.

The temperature chart is instructive. The first days witnessed a steady rise in the temperature culminating on the evening of the fourth day at 102.5° F. It was on this evening also the patient had the chill and an accompanying temperature of 105.6° F. The next day there was a fall to 101° F., and during just two weeks there was a constant morning temperature of 100° F., and evening one of 101° F. For the ensuing two weeks there was a daily fluctuation from 99° F. to 100° F., then the temperature dropped to normal, and remained stationary. The constant elevation of temperature I attribute entirely to the great disintegrating mass of the fibroids.

NITRO-GLYCERINE AND THE CHLORIDE OF GOLD AND SODIUM IN THE TREATMENT OF ALBUMINURIA.[1]

BY ROBERTS BARTHOLOW, M. D., LL. D.

HITHERTO the therapeutics of renal diseases have not advanced in the same ratio as our knowledge of their pathology. It cannot be said now that a cure has been found, but that two remedies of real value are available. My contribution to this symposium, on albuminuria, consists in an attempt to define the place which these remedies should occupy in a curative scheme. To do this, in even the briefest way, I must clear the ground with a preliminary statement.

I start with the proposition that those renal lesions united by the common symptom — albuminuria — are of neural origin. There is a kinship between diabetes and Bright's disease. One of these is sometimes substituted for the other; and during the course of some rare cases of exophthalmic goitre this substitution occurs. Irritation of a certain part of the floor of the fourth ventricle is followed by glycosuria; of another part by albuminuria. The recent observations of Da Costa and Longstreth prove that a relation exists, whether casual or sequential, between certain renal lesions and degenerative changes in some ganglia of the abdominal sympathetic. The hypertrophy of the muscular coat of the arterioles, discovered by Dr. George Johnson, and the increased tension of the vascular system due to an irritation of the vaso-motor centre in the medulla, both present in the chronic forms of albuminuria, are further evidences of the agency of the nervous system. It was, more especially, the condition of elevated tension of the vessels which led to the use of nitro-glycerine. This remedy before all else reduces the vascular tension. It also lessens the work of the heart by removing the inhibition exercised by the pneumogastric nerve.

This remedy appears to have been first used by Mr. Robson, an English surgeon, in cases of albuminuria, and by him employed, because the high tension of the vascular system has proved to be so pronounced an element in the more chronic cases. I have, myself, seen some remarkable instances of relief — indeed of cure — effected by it. If time were now available, I could give some striking examples. In cases of mitral disease accompanied by albuminuria it also renders the highest service — for the diminished peripheral tension lessens the work to be done by the heart, and assists in the more equal distribution of the blood. The effect of this in relieving the renal congestion is obvious.

Chloride of gold and sodium has quite another function. It has long been known that this remedy has a special direction to the genito-urinary apparatus. The ovarian and uterine organs in the female, the testes and vesiculæ seminales in the male, are stimulated by it, and the kidneys, by means of which it is eliminated, and in which it tends to accumulate, are decidedly affected by it in function and structure. In common with some other agents of the class to which gold belongs — for example, corrosive sublimate — the chloride acts on connective tissue and checks its overproduction, or its hyperplasia. It would be quite impossible in this note to go over the evidence on these points, and hence I must ask your assent to these statements. They have been accepted as true of gold, from the days of the alchemists and iatro-chemists, as any one may ascertain from that curious collection of mediæval medical learning — the Anatomy of Melancholy. It has happened, strangely enough, that Hahnemann and his followers have profited by this knowledge, and have used gold preparations — especially *aurum potabile* — in the treatment of renal diseases with success.

How and when are these remedies to be used?

Nitro-glycerine is now administered, as all present know, in the form of the centesimal solution — one minim of the pure drug to 100 minims of alcohol. The initial dose of this one per cent. solution is one minim, which should be increased until the very characteristic physiological effects are produced. The susceptibility to the action of nitro-glycerine varies greatly, and hence the dose cannot be stated in advance. It is necessary to produce some obvious effect. To maintain the same level of action, a slight increase in the dose may be required from time to time. As the effect is not lasting, the interval between the doses should not exceed three or four hours.

The administration of nitro-glycerine should begin in acute cases immediately after the subsidence of the acute symptoms. It is indicated in chronic cases at all periods, but is more especially useful, if given before hypertrophy of the muscular layer of the arterioles has taken place. When it acts favorably, the amount of albumen in the urine steadily diminishes. The mechanism of its action consists in the lowering of the pressure in the renal vessels. How far any curative effect proceeds from action of this remedy on the sympathetic system remains to be determined.

[1] Read before the Philadelphia County Medical Society, December 19, 1883.

Chloride of gold and sodium is indicated in the subacute and chronic cases, especially the latter. The earlier it is given the better, if structural changes are to be prevented or arrested. The good effects to be expected from it will depend necessarily on the extent of the damage already inflicted on the kidneys.

The usual dose is one twentieth grain, twice a day, but this may be much increased, if necessary. At the outset, one tenth grain may be given; in a week the dose should be lowered to one fifteenth grain, and after a month the regular dose of one twentieth grain should be steadily pursued, with occasional intermissions. Indigestion, gastralgia, and colic pains, nausea or diarrhœa, are occasionally caused by it; and if so, the quantity administered must be reduced. It is usually borne without any discomfort, but after prolonged administration, salivation, weakness, emaciation, trembling and other nervous phenomena may occur possibly. Such effects, however, are wanting in my experience.

The treatment of albuminuria by nitro-glycerine and the chloride of gold and sodium does not necessitate the exclusion of other means — hygienic, climatic, or dietetic. These remedies should, however, be given uncombined at different hours, and their actions should not be hindered or obscured by the effects of other agents given with like purpose. To this general statement there may be two exceptions: with nitro-glycerine, amyl nitrite or sodium nitrite may be given; with the gold and sodium chloride, corrosive sublimate may be combined. If doubts may be felt in regard to the propriety of depending on the utility of these remedies, they need not be long experienced, for if no good effects are observed in two weeks they may then be discontinued.

REPORT ON OBSTETRICS.

BY C. M. GREEN, M. D.

THE DIAPHORETIC TREATMENT OF PUERPERAL ECLAMPSIA WITH HOT BATHS.

IN the last report on Obstetrics[1] was an account of six cases of puerperal eclampsia treated by Dr. Carl Breus with hot baths. To avoid repetition reference is made to that report for a description of the method adopted by Dr. Breus, together with his results. In a second paper[2] Dr. Breus has reported eleven more cases similarly treated with even better results than in the first series. Of these cases, the first eclamptic attack occurred in four, early in the first stage of labor; in two, after a long first stage; in one, during the second stage; and in four, in the first day post partum. The majority of the cases were severe: in only three instances, in which convulsions first occurred post partum, was a favorable prognosis warranted; yet of the eleven cases one only had a fatal issue. This patient, a primipara, aged nineteen, with albuminuria and œdema, was brought to the clinic insensible, having had her first attack two hours previously. Within two hours of her admission to hospital, during which time she suffered four attacks, she was delivered with forceps of a living child: the hot bath and subsequent wrapping up were then employed, and diaphoresis established: convulsions recurred but once thereafter. On the following day the urine was free from albumen, and the facial œdema had disappeared; but that evening the temperature rose to 104° F., and peritonitis developed which resulted fatally in three days: so that death was attributable only indirectly at most to the eclamptic condition. The other ten cases all recovered. Of the eleven children only two were lost, namely, by craniotomy.

Dr. Breus further testifies to the great value of this treatment as a prophylactic measure during pregnancy; not only in cases where the urine gives evidence of nephritis, but also in cases of albuminuria and œdema due to hydræmia, in which one apprehends cerebral effusion with consequent pressure and acute anæmia resulting in the eclamptic seizure. He has never known premature labor to have been induced by the baths, nor other unpleasant results to follow their use.

THE CERTAIN DIAGNOSIS OF PREGNANCY BEFORE THE APPEARANCE OF THE FŒTAL SIGNS.

Most authorities agree that the certain signs of pregnancy are all physical signs of fœtal origin; namely, the fœtal heart, the spontaneous movements of the fœtus perceptible to the physician, and abdomino-vaginal ballottement. Only exceptionally are any of these signs available before the sixteenth or eighteenth week; consequently the diagnosis of pregnancy before that time is only presumptive. Dr. F. Loviot believes, however, that "the existence of pregnancy can be surely recognized, at least ninety-five times in a hundred, before the appearance of the fœtal signs; at two months, two months and a half, *a fortiori* at three months and more;" and he writes[3] to maintain this thesis.

As the rational maternal signs afford only presumptive and confirmatory evidence, Dr. Loviot relies upon physical changes in the uterus which he appreciates by palpation, by the vaginal touch, and above all by conjoined manipulation. He agrees with Professor Pajot that the changes undergone by the cervix are not characteristic of pregnancy, but may be due to catamenial congestion, to metritis, and to various pathological conditions: he therefore directs his attention to the body of the uterus, which he believes is modified by pregnancy in a characteristic manner. By conjoined manipulation the superior segment of the pregnant uterine body is accessible above the symphysis pubis under the form of a rounded, depressible, elastic tumor: the inferior segment is depressed and enlarged, and broadened out of proportion to the cervix, so that it juts out, as it were, and forms around the base of the cervix a sort of cushion; a characteristic collar. As a whole the body of the gravid uterus is soft and elastic, and under the examining finger gives the sensation of pressure on a hollow rubber ball. This soft consistency exists at all accessible points; in front, behind, to the right and to the left. The examination necessary to appreciate these modifications ought not to cause pain. Neither uterine congestion nor chronic metritis, nor again fibroid tumors even when softened, impart identical sensations to the examining finger; although if pregnancy is complicated with uterine fibroma, the diagnosis will be more difficult.

CERVICO-VAGINAL LACERATION WITH RETROPERITONEAL HÆMATOMA AND EMPHYSEMA.

Dr. G. Bayer reports[4] two fatal cases of cervico-

[1] Vide vol. cix., No. 2, of this journal.
[2] Archiv für Gynækologie, Band xxi., Heft 1.
[3] Archives de Tocologie, Mai, 1883.
[4] Archiv für Gynæk., Band xxi., Heft 1.

vaginal laceration which possess very considerable scientific interest; not only on account of the rarity but also because of the similarity of the post-mortem appearances in cases differing widely in their ætiology and clinical course.

CASE I. An octavipara eight days before, and again on the day of, admission to hospital had uterine hæmorrhage: the os was about two inches in diameter, the placenta prævia, the fœtus in transverse position. A considerable hæmorrhage being excited by examination, and the pains being weak, a colpeurynter was introduced. One hour and a half later the colpeurynter was removed, and podalic version was performed through an os so small and undilatable as to require some force in introducing the hand: extraction was quickly performed without difficulty, and the placenta came spontaneously a moment later. The uterus contracted well; but very profuse hæmorrhage ensued from the posterior vaginal wall. An hour was spent in trying to check the hæmorrhage with sutures: the woman was restless and pale. Resort was now had to the tampon, and the hæmorrhage checked. Twelve hours later ensued dyspnœa, cyanosis, jactitation, and death from acute anæmia.

CASE II. A secundipara, aged twenty-four, hitherto in the best of health, was twenty-six hours in the first stage of labor at full term. While the head, after complete dilatation of the os, was passing normally and quickly through the pelvis, the woman suddenly grew pale and complained of ill-defined pain in the suprapubic region: the pulse was frequent. After the birth of the head there was felt above the symphysis pubis and to the right well marked crepitation. After the child was born, considerable blood mixed with air was expressed from the uterus, and the crepitation could no more be felt; but, although the uterus was well contracted, a profuse hæmorrhage continued, which however was checked with a tampon. Symptoms of septic poisoning soon appeared, accompanied by severe pain in the region of the right kidney: deep palpation from the right inguinal region upward gave a sense of soft resistance, and the uterus was pushed to the left. Death ensued two days after labor, from septicæmia.

Autopsy disclosed in both cases a right-lateral laceration of the cervix (in Case II. to the os internum, in Case I. to one centimetre below the os internum), and a tear of the vaginal vault without perforation of the peritoneal cavity. Through this tear blood and air bubbles had extravasated into the retro-peritoneal connective tissue and had extended upward along the psoas magnus to the region of the right kidney, pushing up the peritonæum. In Case II. the extravasation had degenerated into a dirty sanious pulp mingled with ill smelling gas.

These cases resemble others reported by McClintock, Hecker, Dohrn, and Löhlein in so far as lateral cervico-vaginal tears have given rise to the effusion of blood and air into the subperitoneal tissue; but in the hitherto reported cases, except one of Hecker's, the subperitoneal emphysema has been limited to the ante-uterine region. In Bayer's cases, on the contrary, and in one reported by Hecker,[1] air bubbles mingled with blood advanced along the psoas behind the peritonæum to the region of the kidney.

The treatment of such cases is well-nigh hopeless. The application of sutures to check the hæmorrhage is difficult; and if successfully performed, results in shutting up a quantity of blood and air to degenerate in a closed space: moreover, the opening of the vagina necessary to the insertion of sutures favors a further entrance of air: the antiseptic tampon therefore is to be preferred. A further difficulty lies in the fact that the air and blood are diffused in the connective tissue, and not confined in a sac which can be easily drained and irrigated: it is probable, however, that when death does not occur from hæmorrhage, the skillful introduction of a drainage tube and careful cleansing afford the best hope of success, as in complete ruptures of the uterus.

[1] Monatsschrift für Geburtshülfe, Band xxxi., S. 294.

THE ANATOMY AND ÆTIOLOGY OF RUPTURE OF THE PERITONEAL PORTION OF THE VAGINA DURING LABOR.

Of interest in connection with the last subject is a valuable paper by Dr. D. Berry Hart under the above title.[2] After pointing out the anatomical structure of the pelvic canal, Dr. Hart emphasizes the fact that whereas the anterior vaginal wall is strengthened by the bladder and urethra, and the inferior part of the posterior wall by the rectum and perineal body, the upper inch of the posterior wall is relatively weak. When, moreover, during labor the contracting longitudinal muscular fibres of the uterus exert upward tension on the cervix and vagina, the anterior vaginal wall suffers very little elongation, while the posterior wall is elongated to about five inches. If then the uterine tension is extreme, as in cases of fœtal mal-position, of faulty pelvis, or where the fœtal head is unusually large, the cervix or vagina, or both, will yield at the point that is structurally weakest; namely, as regards the vagina, at the upper part of the posterior wall.

Dr. Hart sums up the whole question as follows: —

"(1.) During labor the uterine muscle exercises an upward tension on the cervix and pelvic floor segments.

"(2.) The fœtal head exercises a dilating power on the cervix and pelvic floor segments, this dilating force acting at right angles to the long axis of the cervix and vagina.

"(3.) The vaginal walls are constructed so as to bear longitudinal tension and eccentric strain. This is provided for by the rugæ and the felted structure of the vagina.

"(4.) The anterior vaginal wall, from its close incorporation with the urethra and loose union with the bladder, is the strong wall.

"(5.) The posterior vaginal wall is structurally weak at its upper half inch, is more elongated during labor than the anterior one, and therefore —

"Rupture of the vagina is most common where the posterior wall is covered by peritonæum, and when it occurs is a tension tear like the cervical rupture."

THE PREVENTION OF OPHTHALMIA NEONATORUM.

Professor Credé, in a third paper[3] on this subject, has given the results of his further observation and experience. Concerning the ætiology of this affection he concludes: —

(1.) That the blennorrhœa of the newborn is caused by a specific virus identical with that of gonorrhœa.

(2.) That the virus, which is contained chiefly in the vaginal secretion of women suffering from vaginitis

[2] Edinburgh Medical Journal, July, 1883.
[3] Archiv für Gynæk., Band xxi., Heft 2.

granulosa, comes in contact with the conjunctivæ during the expulsive stage for the most part: consequently.

(3.) That a protracted expulsive stage (and Credé considers the period protracted if over one hour in duration) favors the inoculation: further,

(4.) That rupture of the membranes more than three hours before the birth of the child not only prolongs the labor and thereby increases the opportunity for infection, but also renders it possible for the examining finger to carry the virus to the eyes of the child: also, —

(5.) That as boys are in the average larger than girls and therefore, *cæteris paribus*, entail a longer expulsive stage, they are more liable to be infected than girls.

(6.) That the incubation stage of the virus is at most not longer than five days; and that consequently blennorrhœa appearing later than five days after labor must be attributed to post-partum infection by the unclean fingers of mother or nurse, or by contact with infected sponges or linen.

(7.) That the normal secretion of the vagina cannot cause a specific blennorrhœa, but may give rise to a simple catarrh.

After trial of various methods, Credé now employs the following treatment: After the cord is cut, the child is bathed and the eyes cleansed with a bit of cloth and pure water: the lids are then separated a little, and by means of a glass rod a single drop of a two per cent. solution of nitrate of silver is allowed to fall upon the cornea. With the great majority of children no reaction follows this application; but in some cases, especially in those of premature birth, there appears several hours after the application a slight hyperæmia of the conjunctivæ without swelling, and a somewhat increased secretion: these appearances vanish, however, on the third day at the latest without treatment. Credé still employs the vaginal douche for the sake of cleanliness; but he does not think it has any especial value in preventing fœtal inoculation. Before the introduction of this method into the Leipsic Lying-in Hospital, blennorrhœa was observed in about ten per cent. of all cases: since June, 1880, when the measure was systematically adopted, the proportion has fallen to about two tenths of one per cent. A more favorable result could scarcely be expected.

FORCEPS IN BREECH PRESENTATIONS.

Prof. W. T. Lusk has reported[1] to the Practitioners' Society of New York a case in which he applied forceps to the breech. A primipara, aged thirty-two, had had a long first stage, when the cessation of pains made operative interference necessary. The breech presented high up in the pelvic cavity with both thighs flexed. Unsuccessful effort was made to extract the breech by traction with the index fingers hooked into both groins: it was then decided to try forceps. One blade of the ordinary Simpson forceps was applied over the sacrum, the other over the posterior surface of the opposing thigh. The forceps did not slip: the breech was brought to the perinæum, and a living child weighing eight pounds was delivered in fifteen minutes from the beginning of the operation. The only injury occasioned by the forceps was a slight abrasion of the abdomen, which healed quickly.

[1] New York Medical Record, November 3, 1883.

Hospital Practice and Clinical Memoranda.

SALIVARY CALCULI OF THE RIGHT SUBMAXILLARY GLAND.

BY J. BRADFORD COX, M. D., SAN JOSE, CAL.

MR. J. D., aged fifty-two years, born in Prussia, single, a mechanic, in January, 1879, had an inflammation of the right submaxillary gland, which lasted two or three weeks. The abscess which resulted, instead of breaking externally, notwithstanding poultices to promote it, discharged very freely through Wharton's duct. There was a continuous discharge of pus through that duct until May 29, 1882, when he called at my office for treatment.

An examination showed the gland to be a very little larger than normal and indurated. Pressure on it caused pus to flow from the outlet of the duct near the frænum linguæ. An ordinary silver probe passed readily along the course of the duct to the gland. The touch revealed either necrosed bone or a calculus, the removal of which I assured him would be necessary before he could recover.

As he had consulted several other physicians, and used various remedies without benefit, he consented to an operation. This consisted in cutting into the gland from the inside of the mouth with an ordinary bistoury, wrapped with a roller bandage except at the point. The end of the probe, passed through Wharton's duct, served as a guide. When the opening was large enough I introduced a pair of bullet forceps and removed two calculi. The larger is irregular in shape, with a smooth surface on one end; the remainder of the surface is quite rough. It is thirteen millimetres long, eight broad, and seven thick. The smaller is flat shaped, smooth on one side, where it probably rested against the other. There is a similar smooth place on the end of the larger which corresponds in shape and surface with this. It is rough on the other side and edges. It is seven millimetres long, five broad, and two thick. They are dirty brown in color; the rough projections lighter than the dark background; very hard, having the appearance of brown quartz on the smooth surfaces. Internally the larger one is snowy white. It shows under the microscope an amorphous scaly detritus, many of the fragments having the shape of the epithelium from the mucous membrane of the mouth, but no definite forms of crystallization.

At the time of writing the patient is entirely well. The duct is larger in calibre than normal; and the gland secretes what appears to be healthy saliva, which can be pressed out through the duct.

— The statement of the *British Medical Journal* that its weekly issue amounts to eleven thousand six hundred and fifty copies — a "circulation about equal to the combined circulation of all the other weekly medical journals published in England" — seems a little startling until it is remembered that the British Medical Association numbers ten thousand and fifty, to each of whom a copy is furnished. It follows that its circulation among non-members, including the exchange list, amounts to about sixteen hundred.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION OF OBSTETRICS AND GYNÆCOLOGY.

J. B. SWIFT, M. D., SECRETARY.

OCTOBER 17, 1883. DR. C. P. STRONG reported

AN UNUSUAL CASE OF OBSTETRICS.[1]

DR. SHERMAN asked if there was any hæmorrhage from the fibroids.

DR. STRONG said there was none. He feared there would be, and ergot was given immediately after delivery with the idea of preventing it.

DR. SHERMAN asked if any bad effects were seen from the continued use of ergot, and spoke of a case where the continued use affected the sight, the trouble stopping on discontinuing the drug, and being reproduced when the medicine was resumed.

DR. STRONG said he had never seen any trouble himself, but had seen cases of the kind reported. In one case he had given it continuously for seven months without any bad effect. At first it was given for two weeks, then stopped for a few days, and then resumed, but finally it was taken continuously.

DR. SHERMAN asked the strength of the solution of chlorinated soda.

DR. STRONG replied at first he used one to ten, but this being too strong it was reduced to one to twenty, which was very grateful to the patient. He used two quarts of the solution four times a day. In intra-uterine injections he would not use it because if there was any pus present it would make a coagulum which might obstruct the canal.

In regard to the collapse, he attributed it to shock caused by the carbolic acid solution entering the uterus.

DR. SHERMAN said that while he was at the Lying-In Hospital he had given a great many intra-uterine douches of carbolic solution. At first they were given very hot, temperature of 115° F. or 120° F., and with these he had seen cases of collapse. Afterwards the temperature was reduced to 105° F., and no cases of collapse were seen. He thought the symptoms were caused rather by the heat than the carbolic acid.

DR. COBB said he had frequently applied pure carbolic acid and a solution of equal parts of carbolic and glycerine to the interior of the uterus, and had never had any bad effects from it.

DR. STRONG replied that carbolic acid of full strength would have such an effect on the mucous membrane, smearing it over with a coagulum, that absorption would be prevented. In these cases the symptoms were not seen, but were produced when the carbolic was in a weaker solution.

DR. SHERMAN asked if there had been any symptoms of poisoning after the shock.

DR. STRONG answered there were none. Several days after there was a scanty flow of dark-colored urine, which at first he was inclined to attribute to the carbolic, but as the patient had the same thing when no carbolic had been used he did not think it could have been due to that.

DR. COBB said he used carbolized douches in all his cases, and had never seen any bad effects from them.

DR. STRONG said he never had before this case, but now he had concluded never to use carbolic acid for these douches. He thought there were other disinfectants which were just as effectual, and from the use of which such symptoms had never been reported.

DR. LIEBMANN asked if these symptoms might not be due to the fluid passing through the Fallopian tubes.

DR. STRONG replied that in the puerperal uterus where the os was so widely open, allowing a free exit, it must be extremely rare, but in the non-puerperal uterus it might happen.

DR. LIEBMANN spoke of an article which he had recently seen where the idea was advanced that the hot douches caused an acute inflammation in the mucous membrane, this causing œdema which prevented hæmorrhage by pressure on the vessels, and the shock which was sometimes seen was caused by this acute inflammation.

DR. SHERMAN asked if there was any post-partum hæmorrhage.

DR. STRONG said there was none. Fifteen minims of Wyeth's aqueous extract of ergot was given subcutaneously as soon as the placenta was removed.

DR. STRONG spoke of putting the patient under the influence of opium immediately as a preventive measure in cases where peritonitis is feared. In his case the patient was given opium enough to just affect her without narcotism, and this was kept up for ten days. She did not complain of a pain, nor was there any tenderness following the manipulation.

DR. E. O. OTIS asked what Dr. Strong would use as a vaginal injection.

DR. STRONG replied that in both his obstetric and gynæcological cases he used a solution of chlorinated soda. There was one objection to it, its odor, which resembled iodoform. He had never used boracic acid as a vaginal injection, but had used it in cystitis. He used a saturated solution with enough hot water added to raise it to the required temperature. He spoke of a case of paralysis of the bladder where this solution was used as a preventive. As long as the bladder was washed out with it there was no trouble, but on discontinuing the acid cystitis developed, which was stopped by renewing the acid washings. He did not think it was a sufficiently powerful antiseptic for vaginal douches.

DR. COBB asked if Dr. Strong used vaginal douches in all cases of labor.

DR. STRONG replied it depended on the attendants. If they were sufficiently intelligent and reliable he used the douches, but if they were not he merely had the genitals bathed with some antiseptic solution. He thought that among the better class of patients they would consider themselves neglected unless the douches were given. In cases where intra-uterine douches were needed he always gave them himself.

[1] See page 30 of this number of the JOURNAL

RHODE ISLAND MEDICAL SOCIETY.

THE usual quarterly meeting of the Rhode Island Medical Society was held in Providence, December 20th, the President, DR. JOB KENYON, in the chair.

The secretary being absent DR. F. B. FULLER, of Pawtucket, was appointed secretary *pro tem.*

As recommended by the Board of Censors, Drs. Clarence M. Godding, of Providence, and Philip K. Taylor, of Kingston, were admitted to fellowship.

THE MEDICAL EXAMINER QUESTION.

DR. LLOYD MORTON, of Pawtucket, read the report of the committee on the proposed law providing

for medical examiners and abolishing the office of coroner in this State. The report included the draft of a law modeled after the medical examiner system of Massachusetts, but adapted to the legislative and judicial systems of Rhode Island.

The proposed act was attentively considered by the Society, and will be submitted to the General Assembly in January.

A suggestion to expunge the name "medical examiner" and retain "the venerable title of coroner" was not favorably received. The committee who drafted the act, together with the President, were elected the committee to present the subject to the attention of the General Assembly.

Dr. D. H. Batchelder, of Cranston, read a paper on the Pathology and Treatment of Inflammation.

Dr. Herbert Terry, on behalf of Dr. A. D. Weeks, in whose practice the case occurred, reported

A CASE OF TUBAL PREGNANCY,

and exhibited the specimen. The patient was healthy, aged thirty-two, married two years, and eleven months before this illness had a normal confinement. The symptoms were sudden and severe. At four P. M. she felt a pain in the right ovarian region accompanied by faintness and vomiting. At seven P. M. there was a collapse, and she died four hours later.

At the post-mortem examination the abdominal cavity was found filled with blood. There was a rupture of the right Fallopian tube, within which was the fœtus. The fœtal head presented at the opening, which was about the size of a silver three-cent piece.

The following points were the most important[1]:—

(1.) The thinned edges at the point of rupture.

(2.) The decidua in the uterine cavity.

(3.) The partially developed placenta and the chorion villi in process of atrophy.

(4.) The corpus luteum in the ovary of the opposite side.

Dr. Anita E. Tyng, resident physician and superintendent of the Woman's Hospital in Philadelphia, reported three cases of ovariotomy.

ANEURISM OF THE THORACIC AORTA.

Dr. Charles O'Leary reported the following case:—

A man, thirty-four years of age, had suffered from continual pain in the back for four years. All through his illness there had been a pulsation in the lumbar region strong enough to visibly lift the fingers. There was no bruit. Aneurism was suggested, but its origin could not even be guessed. Several eminent physicians saw the case, and all agreed that, the possibility of aneurism excepted, it was a case of transmitted pulsation. The pain in the back was at times severe, extending into the left gluteal region and along the course of the sciatic nerve. It was worse if the patient moved about, and he was often compelled to stop and stand awhile when on the street. He used morphia hypodermically.

He was last seen by Dr. O'Leary five days before his death, and was then suffering intensely from pain in the back and left knee, for which two and a half grains of morphia were given before ease was obtained. A tumor could be felt through the abdominal walls, apparently connected with the left psoas muscle. The patient died in a convulsion.

At the autopsy an aneurismal sac was found extending from the eleventh dorsal to the fifth lumbar vertebra. The eleventh and twelfth dorsal and fourth and fifth lumbar vertebræ were eroded, and there were a few loose pieces of bone. The left psoas muscle was pushed outward and greatly thinned. The sac extended somewhat to the right of the spine in the dorsal region, and communicated with the lower part of the thoracic aorta just above the diaphragm on the left side. The sac had not ruptured.

The President appointed delegates to other State medical societies as follows:—

Maine, Drs. G. W. Porter, of Providence, and D. O. King, of Pontiac. New Hampshire, Drs. C. H. Fisher, of Providence, and Ariel Ballou, of Woonsocket. Vermont, Drs. E. M. Snow and C. H. Leonard, of Providence. Massachusetts, Drs. O. W. Brown and A. E. Ham, of Providence. Connecticut, Drs. G. T. Swarts, of Providence, and F. J, Smith, of Coventry. New York, Drs. G. P. Baker and E. T. Caswell, of Providence.

Following adjournment the Society was entertained by the President.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.[2]

C. B. NANCREDE, M. D., RECORDER.

Thursday evening, December 13, 1883. Dr. J. H. Musser in the chair.

CALCIFIED PERICARDIUM. DOUBLE MITRAL DISEASE.

Ella S., white, aged twenty-three, was admitted to the University Hospital in September, 1880, complaining of palpitation and dyspnœa, and suffering from an œdematous and eczematous condition of the lower extremities. She was a girl of regular habits, somewhat exposed to changes of weather and to wet, doing no very hard work. She had had the diseases peculiar to childhood, but never rheumatism nor chorea. Her father had had acute articular rheumatism, and died suddenly; beyond this there was nothing peculiar in the family history. Three years before admission she first noticed slight palpitation and dyspnœa on exertion. For some time before that she had been subject to frequent attacks of epistaxis. One year afterward dropsy appeared in the ankles, and spread upward. The palpitation and dyspnœa became more troublesome, her flesh and strength failed, and she was compelled to quit work and come into the hospital. When first seen she was pale, anæmic, weak, breathless on exertion. The heart's apex beat was in the seventh interspace, one inch outside of the nipple line; action strong and heaving. Best heard over the apex beat, but transmitted feebly up toward the base of the heart and well out into the axilla, was a loud, blowing systolic murmur. There was no pain in the heart nor tenderness on pressure over it, nor had there ever been. Over the lungs were scattered moist râles; the respiratory murmur was harsher on the left than on the right. Cough was slight with some mucous expectoration. The lower extremities were œdematous, and the abdominal cavity about half filled with fluid. The liver was slightly enlarged. The urine was normal in quantity, and contained neither albumen nor casts.

[1] Cases recently reported: D. D. Gilbert, M. D., Boston Medical and Surgical Journal, December 6, 1883. C. H. Briddon, M. D., New York Medical Journal, December 8, 1883.

[2] Continued from page 17.

Under treatment the urine became copious, the œdema gradually disappeared, and the heart action became stronger and more regular. In a few days friction sounds appeared at the base of the right lung. Any slight exposure would bring on an attack of intense congestion of the lungs with dyspnœa that often threatened life, and with these attacks there was often congestion of the kidneys with suppression of the urine. Between the attacks the heart retained its power well, though it slowly dilated. At intervals she complained of dull pain in the hepatic region. The rough respiration noted at first over the left lung became more and more marked till finally over a small area just below the spine of the scapula it had developed into bronchial breathing. Friction sounds came and went. There were always moist râles scattered through the lungs. The expectoration was mucous or rarely muco-purulent. Three months after she came under observation there was developed at the second right intercostal space, and carried out into the arteries of the neck, a systolic murmur differing in pitch and tone from the mitral systolic. About this time, too, she complained of pain in the heart whenever its action was excited. Soon afterward albumen was found in the urine, but no casts; this was the only time it was ever detected. Fourteen months after she was first seen there was noticed just inside the apex beat, and carried indistinctly toward the base, a harsh, short murmur, immediately preceding the systolic murmur, and separated from it by an exceedingly short but appreciable interval. This murmur was noted on several occasions afterward, but was much more frequently absent than present. Its appearance and disappearance seemed to be attendant on no definite conditions. Soon after it was first noticed she had several attacks of epistaxis, and afterward occasional slight hæmorrhages from the lungs. She was discharged in March, 1882, and was readmitted last September. She had been gradually losing ground. Seven months before she took cold; the dropsy returned and persisted. When seen the whole body was œdematous, and the abdomen enormously distended. The apex beat was in the fifth interspace in the mid-axillary line. The systolic murmurs were, perhaps, louder, but beyond this had not changed. Over an area between the left nipple and the sternum was heard a harsh, low-pitched, presystolic murmur. It was much more apparent than the former presystolic murmur, but had the same characters. Its point of maximum intensity was just to the left of the sternum. It was constant. The respiratory murmur over the left lung was very much harsher than over the right. Below the spine of the scapula the breathing was sometimes blowing with mucous râles, sometimes cavernous with gurgling râles. The expectoration was mainly frothy mucus. She died three weeks after admission in a fit of dyspnœa.

Autopsy seven hours after death. General dropsy, most marked in the lower extremities and genitals. On the lower part of the abdomen there is a marked varicose condition of the cutaneous lymphatics. Cavity of the pericardium is completely obliterated by adhesions. The two pericardial surfaces and the fibrous tissue connecting them had been changed into a calcareous plate, three inches broad, completely encircling about its middle the heart with the exception of a space one inch wide on the posterior surface of the left ventricle. This calcified condition extended for one inch on the anterior surface of the pulmonary artery. The heart, with the calcified pericardium, weighed twenty-eight ounces. The auricles were dilated, their walls thinned. The ventricles were dilated, their walls thickened and undergoing fatty degeneration. The leaflets of the mitral valve were thickened and rigid; the mitral orifice was very decidedly narrowed. In the inner surface of the left auricle were several calcareous patches. The aorta was very small, scarcely admitting the index finger, and showed patches of atheroma. The lungs were chronically congested and œdematous, the condition being most marked on the left; there was no breaking down of their substance. The abdomen contained five gallons of straw-colored serum. The peritonæum was thickened and roughened. The liver weighed three and one half pounds, and was cirrhotic. Its capsule was much thickened and adherent to surrounding structure. The mucous membrane of the stomach was mammillated and thickened. The kidneys showed cyanotic induration.

SECTION OF FIBROMA MAMMÆ.

Presented by DR. MACCONNELL for Professor Pancoast.

The patient was twenty-two years of age, and the growth was of seven months' duration. Fibromata of the breast are very frequently found, although some English authorities consider them to be of rare occurrence. They have been variously described under different names by writers. Birkett considers them a form of adenoma, Broca, adenoma with predominance of stroma, etc., etc. This tumor was of an ovoid shape, firm and elastic, and on section presented a maroon-colored tissue, which under the microscope is seen to be composed of dense bundles of mature fibrous tissue with but few nuclei. In some portions bands of wavy connective tissue are seen. The epithelial elements of the acini are hyperplastic.

SECTION OF LARGE SPINDLE-CELLED SARCOMA OF LOWER JAW.

Exhibited by DR. MACCONNELL for Professor Pancoast.

The patient was a man aged twenty-four years. The growth had existed for about three years. The egg-shell crackle was readily elicited, the growth being of central origin. On section it presented a whitish appearance, and was permeated by spiculæ of bone.

LIVER OF CHICKEN WITH TUBERCULAR GROWTHS.

Exhibited by DR. MACCONNELL.

The microscope clearly proved the nature of the growths.

DR. FORMAD had seen four or five similar cases in chickens, and two in turkeys, in all of which he had detected tubercle bacilli.

DR. BARTON was much interested in two of the specimens presented by Dr. MacConnell. He was much surprised as to the nature of the tumor of the jaw, in that it was a spindle-celled and not a giant-celled sarcoma. Its site and duration would clinically have clearly indicated one of the myeloid variety. The sections of the mammary growth differed from those examined by him in that in adeno-fibroma the glandular elements were more evenly distributed, whereas this section reminded him of his former studies of an elderly normal gland, such large tracts are found without any traces of gland tissue; whereas in

all adeno-fibromas examined by him the adenomatous and fibrous elements were relatively more evenly distributed, giving the idea of the neo-genesis of both, and not the atrophy of one, and the proliferation of the other.

Recent Literature.

Surgical Applied Anatomy. By FREDERICK TREVES, F. R. C. S., Assistant Surgeon and Senior Demonstrator of Anatomy at the London Hospital, etc., etc. Illustrated with sixty-one engravings. Philadelphia: Henry C. Lea's Son & Co. 1883.

This little volume pleases the eye by its neatness and compactness, and we are glad to find the pleasant impression much strengthened by a perusal of its contents. Many writers have of late attempted the difficult task of writing an Applied Anatomy, the need of which is felt more and more every day. There is an increasing and perfectly justified aversion to the insistence on dry and useless details which are frequently taught simply because they are in the books. *Facile princeps* among recent works on anatomy as applied to surgery stands Tillaux's Anatomie Topographique, but it is large and in a foreign language. Mr. Treves has given us an excellent addition to our library by writing a book that is not one on surgery, but one on anatomy, bringing out its surgical applications. We think it very much to be regretted that he has given but passing notice to its medical applications also. He might have done so without making the book unwieldy, and then it would have been invaluable as a text-book on topographical anatomy. As it is it goes a long way towards supplying a want. Mr. Treves is well read in the anatomical and surgical literature of other countries. His illustrations are for the most part taken from the works of Braune, Rüdinger, Tillaux, and Agatz. We notice a rather curious mistake about the *calcar femorale* of Merkel or the "true neck of the femur" of Bigelow. Mr. Treves ascribes its discovery to Merkel, and refers to the *American Journal of Medical Sciences* of 1874, which can have contained at most only an abstract of the paper which appeared in *Virchow's Archiv* of that year, not apparently being aware that the structure had been described by Bigelow in 1869. Probably it is through an oversight that he describes it as being on the anterior instead of the posterior part of the neck of the femur. It is a serious error to state that the pleura descends behind only to the spine of the eleventh dorsal vertebra, as it has been found as low as the transverse process of the first lumbar. We are inclined to question the statement that the quadratus lumborum is not usually cut in colotomy, and regret that the author does not point out the frequency of a mesentery to the descending colon. The surface anatomy of the different parts is generally duly discussed, but we should have liked a section on the back as a whole according to the plan pursued by Holden. We regret that the mediastina are barely noticed. It is incorrect to say that the trachea is immediately in front of the œsophagus in the neck. The section on the head is in many respects excellent. Taken as a whole the book is very satisfactory. To be sure there are mistakes and omissions, but it is a good and useful compilation that we believe will be very popular among students. We cannot close, however, without wondering what would have been the fate of an American at the hands of English critics, should he say that an organ "has been found herniated" (page 325). We trust this expression will be found "herniated" *out* of the future editions which we hope to see of Mr. Treves' book.[1] T. D.

— Professor Huxley, at a recent meeting called for the purpose of ameliorating the condition of the population of the East End of London, narrated experiences which could be duplicated by many who have been engaged in dispensary practice in the great cities of this country, but who may not know that they have so illustrious a *confrère*. Professor Huxley said: "Some forty years ago I was very familiar with certain portions of the East End, — one of those waterside portions where you find all the peculiar conditions of the East End in their typical state. I was at that time engaged in the business of my original profession of medicine, and it was my duty to attend the poor of the parish in that particular region. I therefore became familiar with their lives in a manner which is rarely possible to any but the clergyman and the doctor. I remember as if it were yesterday the condition in which a great proportion of those people lived, and it was such that I found in those recent statements which have been brought before you nothing specially novel and nothing unfamiliar. A great majority of the persons who used to come to me complaining of this and that were simply undergoing slow starvation, mitigated by bread and the stuff to which they gave the name of tea. I remember as if it were yesterday a poor deformed creature who was earning her living by making shirts, who came to me with those complaints, — illness and weakness, and all the rest of it, — and to whom I said, what was quite true, 'You want nothing but food.' I recollect the woman throwing out her hands and showing a few half-pence, hardly sufficient to cover her palms, and exclaiming, 'If that be so, how am I to get food?' I have spent hours in a den in which there was scarcely room to turn, attending to the sufferings of a woman who was about to add to a numerous family, the ordinary resting-place of whom was underneath the bed. . . . I left that scene to my great satisfaction, and some time after embarked on a voyage around the world, where I had an opportunity of seeing savage life in all conceivable conditions of savage degradation, and I can assure you in this experience of mine I found nothing worse, nothing more degrading, nothing so hopeless, nothing nearly so intolerably dull and miserable as the life I had left behind in the East End of London. For although the savage may perish of hunger or violence, and never knows whether his life may be his own twenty-four hours, yet there is life in him, he is a man, he is not a mere machine ground down to bring out so much mechanical energy at the expense of so much food; and I most certainly say that if the alternative were presented to me to choose between the life of one of those people in the East End or that of the savage, I would distinctly choose the latter."

[1] Since writing the above we find "herniated" in Dunglison, but are none the more inclined to retract our criticism.

Medical and Surgical Journal.

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NERVE STRETCHING.

THE second Bradshaw lecture was lately delivered before the College of Surgeons of England by its President, Mr. John Marshall, who chose for his subject Nerve Stretching for the Relief or Cure of Pain. The first of the lectures on this foundation, that by Sir James Paget, treated of new forms of disease, and the second, not inappropriately, discusses a new operation for the relief of disease.

The lecturer, himself an enthusiast in his subject, discusses it thoroughly from both the physiological and therapeutical stand-point. The obstinate character of the cases in which recourse is had to the operation (sciatica, locomotor ataxia) seems to justify almost any therapeutic measure which affords even a meagre prospect of relief, while the enthusiasm with which the operation has been taken up in various quarters shows that this prospect has been considered by many quite the reverse of meagre.

At the outset it was proposed not only to relieve the pains of locomotor ataxia, but to retard pathological processes in the spinal cord in such diseases by stretching the sciatic nerves. Wonderful cases of relief from ataxia were reported, but more extended study of cases seems to have shown that when the immediate effect of the operation has passed away the patient may be expected to relapse into his former condition with only a temporary relief of symptoms to repay him for the discomfort and risk attending the operation. Four consecutive cases in which the operation was thoroughly performed by Tiersch, of Leipzig, were reported in the JOURNAL (March 2, 1882) in which not only all the other symptoms of locomotor ataxia returned in full force after a certain period, but special note was made of the fact that after this period the pains were in no case in the least degree lessened. Such results as these have led various authorities to denounce the operation in unmeasured terms. Mr. Marshall takes quite the opposite view, and seems to regard the operation as worthy of a far greater degree of consideration than it at present enjoys. The probability of cure of sciatica he considers great, while the results in relieving the pains of locomotor ataxia he finds by no means discouraging.

In forming an opinion on theoretical grounds of the probable value of nerve stretching in these two affections the different character of the pains must be taken into consideration, and a general idea of the changes produced by the operation must be kept in mind.

In sciatica, as stated by Mr. Marshall, the pains arise probably from irritability of the small nerves which supply the sheath of the sciatic nerve. This explains the distribution of the pain along the course of the nerve, for if the source of irritation were in the sciatic nerve itself the pain would be referred to its extremities rather than along its course. In locomotor ataxia, on the other hand, the pains probably indicate merely the points to which are referred the effects of irritation of the posterior nerve roots in the spinal cord or where those nerve roots leave the cord.

After stretching alterations are visible both in the sheath of the nerve and in the nerve itself, the fibres of the former, for example, are straightened and compressed, while the nerve itself undergoes changes varying in degree according to the force employed, complete degeneration of the nerve elements following excessive stretching, to be succeeded later by regeneration. Motor and sensory functions are in this case modified, and disappear to return during the period of regeneration. Whether the spinal cord itself is materially affected by the operation is extremely doubtful, although Mr. Marshall seems to favor the idea of vaso-motor and trophic changes, and seriously suggests the desirability of stretching the nerve downward in disease of the cord, and upward in sciatica. Such changes must, however, be looked on as purely hypothetical, and it is not easy to see how stretching the sciatic nerve can produce lasting benefit in diseases of the spinal cord or even mitigate the pains accompanying those diseases. The irritation to nerve roots produced by degenerative changes at the spinal origin of the sciatic nerve can hardly be materially affected by stretching the nerve in its course through the thigh, unless, possibly, as a secondary effect of the powerful peripheral irritation. In point of fact the results of the operation in such cases up to the present time would hardly encourage a conservative surgeon to undertake the operation.

In regard to neuralgias the prospect seems somewhat more encouraging, both theoretically and judging by statistics. Many of the small nerves in the sheath of the sciatic must be so stretched by a forcible operation as to lose their functions permanently, and if the stretching is done so near the seat of pain as to destroy the nerves whose irritability causes the pain, a radical cure is by no means impossible. In point of fact the statistical results of the operations for sciatica, while open to the distrust attaching to all statistics of this sort, are so favorable as to justify reserving our opinion on this branch of the subject for the present.

There is a third class of cases in which Mr. Marshall considers nerve stretching indicated, namely, cases of painful ulcer, neuromata, and similar peripheral lesions. From this view we should on theoretical grounds decidedly dissent, for although the pain from such peripheral irritation may be lessened temporarily by destroying the conductibility of the nerve, there is no reason to assume that the relief from pain will remain permanent after the regenerative process has restored that conductibility.

One consideration, and by no means an unimportant one to the practitioner, seems to have been treated rather lightly by the lecturer; this is the *danger* of the operation. Nocht reports one death in twenty-four cases, even in sciatica, a fact by no means to be forgotten in prescribing the operation for a disease in itself not dangerous. As to the danger in diseases of the spinal cord, when we remember that the number of cases considered hardly reaches fifty, the conclusion drawn in the following sentences by Mr. Marshall seems rather startling: "With regard to the dangers of nerve stretching in tabes, if you read the cases, you will find that they are comparatively few. One patient died from chloroform, another from thrombosis in the veins, another from pyæmia due to inattention to antiseptic dressings, a fourth from a similar cause. Then we may record three or four cases in which, undoubtedly, the death may be attributed to disease of the spinal cord set up by nerve stretching, but one of these was a case of spasmodic disease. In other words, the peculiar dangers of the disease for which this operation is performed, superimposed upon the dangers to which all operations are liable, render the mortality so great as to offer a serious impediment to its adoption."

THE NATIONAL BOARD OF HEALTH. THE REPORT FOR THE YEAR 1882–1883.

THE Report of the National Board of Health for the year ending June 30, 1883, shows that of the $50,000 appropriated by Congress for aid to State and local boards of health the sum of $49,947.95 was spent in inspecting immigrants, to control the spread of smallpox, in maintaining the Mississippi River-Inspection Service and the refuge stations at Sapelo Sound and Hampton Roads until October 20, 1882, and the Ship Island Station until November 15th (to accommodate a late-arriving infected Austrian bark). Of $17,500 appropriated for the other expenses of the Board, a little less than $5000 remained unexpended at the end of the year. For the present year Congress has appropriated only $10,000 for all purposes.

The Board has since its creation done work of the greatest practical value, in stamping out yellow fever in New Orleans in 1879, and in restricting its ravages to Memphis in the same year, in establishing quarantine stations in case of cholera or yellow fever importation, in securing sanitary reports from our foreign consuls, in organizing a system of river, railroad, and general inland medical inspection, in restoring confidence where shot-gun quarantines had formerly prevailed, in securing useful legislation to control pestilences, and, most of all, in sanitary surveys and scientific investigations of the utmost importance.

The Board has had a splendid opportunity and it has done good work. For the last two years, however, there has been an evident lack of confidence in it at Washington, the direct result of which has been that Congress has placed in the hands of the President the large appropriation of $100,000 each year, to be used in controlling infectious disease; and the President, through the Secretary of the Treasury, has disappointed the National Board of Health by putting this money at the disposal of the Marine Hospital Service. The Board has apparently not been able to see, what has been so obvious to others, that this action has meant most decidedly that its exsitence in its present form is no longer desired. In any other country than the United States the resignation of its members would accordingly have been speedily placed in the President's hands.

The Board has had an exceedingly difficult task to perform. Most of it has been done thoroughly well. How some of it has been done may be inferred from the thirty pages out of one hundred and two of the report before us, devoted to the old quarrel with the Louisiana Board of Health, and which probably few people are interested to hear now. There may have been fault on both sides, but the issue is an old one and settled long ago.

If the matter of maritime inspection and control of vessels capable of bringing infectious diseases to our ports is left in the hands of the Marine Hospital Service, so far as it can be regulated by a central authority with the coöperation of the various local boards of health, there will be enough for a national health organization to do in supervision of vital statistics, in making sanitary surveys, in chemical analyses of food, air, water, in carrying out scientific investigations, in examinations of the causes of disease and special outbreaks of disease, in suggesting legislation to protect the public health, in advising local boards regarding the means for controlling epidemics, and, if necessary, establishing inspection stations under their own supervision and control, working in harmony with the Marine Hospital Service and State and local boards, in cases where the interests of several States might seem to conflict, or where coöperation is needed.

In that case, the basis of representation of the Board should be very much widened, the members should include other occupations and interests than the medical, annual meetings would probably be sufficient, and some sort of an executive board should be permanently employed in Washington, with duties similar to those of the already established sanitary bureaus of England, France, Italy, and Germany.

THE MASSACHUSETTS BOARD OF HEALTH.

THE part of the inaugural address of his excellency Governor Robinson which refers to the Board of Health, Lunacy, and Charity is of considerable interest to the medical profession of Massachusetts, and, in so far as her old Board of Health was a model for others in various parts of the country, anything affecting it concerns a wider audience.

We cannot, in speaking for the medical profession, express disappointment or surprise that the Governor should not have seen his way clear to recommending at the present moment a division of the present complex organization, nor do we desire to urge a measure, however desirable in the abstract, out of season as

well as in season. But, whilst realizing perfectly by what a variety of considerations political action is and must be controlled, we should be very much disappointed, and in this we believe we express the sentiments of a large and influential part of the profession, should next year's Governor not recommend changes neither "radical nor sweeping," which to this year's Governor seem injudicious.

In the mean time it is unnecessary to scrutinize or criticise his excellency's remarks, which appear in another column, too closely. If not spirited they are at least eminently prudent. Exception might be taken to the expression "a thorough reorganization of the administration of the public charities as accomplished by the Legislature of 1879," and to the statement that "a considerable saving was effected in the operation of the official machinery." Neither is it "plain" that the division of the present conjoined Board, whose name is typical of its cumbrous and vicious organization, would necessitate payment of additional salaries and outlay. No saving has been effected by the union of the Board of Health, nor would additional expense be incurred — even in the supervision of small-pox — by its separation. Good work can be done by the present organization under the most favorable conditions, but better work could and would be done — certainly in the department of health — by a separate board than by a sub-committee.

The one change which his excellency does suggest, and that in the form of a query, relates to a union in the administration of charities of the departments for in-door and out-door poor. Such a change it is, we believe, entirely within the province of the Board of Health, Lunacy, and Charity to effect without action on the part of the Legislature; and, in fact, the action of the Board at its last meeting, only two days after the inauguration, in accepting the resignation of the Superintendent of Out-door Poor, to take effect February 1st, would indicate that such a change had been for some time contemplated.

Health and an unincumbered organization for its supervision are among the most important interests of a State, but it is also true — and this as professional men we may have a tendency at times to forget — they are not the only ones. Another year, it is to be hoped, will make a restoration of a separate Board of Health possible. In the mean time we may heartily reiterate Governor Robinson's, to us not unfamiliar, protest against the introduction of politics, and we may add of personalities, into these questions of charities and sanitation.

THE PRIZE OFFER BY THE WORSHIPFUL COMPANY OF GROCERS, LONDON.

WE have made room in this issue of the JOURNAL for the announcement of the offer and the conditions of the first quadrennial Discovery Prize of £1000 for original research in sanitary science, emanating from the Worshipful Company of Grocers in London. The document is dated May 30, 1883, and seems to be a little slow in circulating; the offer of the prize was referred to in our columns as long ago as last August. The subject proposed — the discovery of a method by which the Vaccine Contagium may be cultivated apart from the animal body, in some medium or media not otherwise zymotic — is well chosen and should excite competition, being directly in the fashionable line of scientific research of the day. Such a discovery to silence the clamor of popular prejudice, we imagine, is even more to be wished in a country like England, where animal virus is less used, than with us. But the discovery and the process of teaching it would be welcome everywhere.

The name of the Company of Grocers associating itself with the advancement of original research in sanitary science suggests some curious reflections. This fraternity was originally denominated the "Pepperers," and was incorporated under its present name in the reign of Edward III. The Livery Companies of London were originally incorporated to benefit trade, to train artisans, to repress bad workmanship, and to exercise benevolence, especially to members of the guilds and their families, of which functions they are represented as performing none at the present time. The Grocers' Company in 1450 obtained the office of "garbeller of spices," which gradually entailed a supervision of the adulteration of food and drugs, with power of prosecution, and the City records show at different periods that these duties were performed very energetically. In 1664, the physicians having obtained a charter of incorporation which seemed likely to abridge the sphere of the company's medical control, the following notice, according to Herbert, appears on their books: Divers members of this company trading in drugs made request and suit for the countenance of the courts in the freedom of their trade, against the invasion of the College of Physicians, who, having lately obtained from his Majesty a patent, with new and strange power of privilege and search, seizure, fine, and imprisonment, are attempting the passing of a bill in Parliament for the ratification of the same, which, if effected, will be an insupportable inconvenience and prejudice.

Among other curious duties of the Grocers was that of deputing two of their fraternity to stand all day with two of the Ironmongers at Bishopsgate to see that no citizen passed through wearing any dress that his position did not entitle him to wear. Herbert's "City Companies" and Gilbert's "The City" give many details of the development of the London Livery Companies which would be interesting to the historically inquisitive.

Within late years the pressure of public opinion has constrained some of the most wealthy of these companies, of which the Grocers is one, to devote a portion of their enormous revenues to other purposes than feasting, and the present prize offer is one indication of good results from much agitation of the great abuses attaching to the administration of these revenues. It was estimated that the Goldsmiths' Company alone expended for feasting during one year in their hall the sum of £30,000, and the total average annual expenditure of all the Livery Companies, with the

accessories of their halls, etc., for feasting was stated, in 1876, at no less a sum than £150,000.

A quadrennial £1000 withdrawn from such an amount, though seeming like a large prize to sanitary science, is but a small alleviation to the burden under which the livers of these livery men labor. It should, indeed, as far as it goes, be twice blessed.

MEDICAL NOTES.

— We understand that Messrs. Weeks and Potter, prominent wholesale druggists, have withdrawn their appeal, and paid their fine in the suit brought against them by the Massachusetts State Board of Health for selling laudanum of inferior strength.

— A new out-patient building at the Massachusetts General Hospital, in memory of the late Dr. George H. Gay, for years a member of the surgical staff of that hospital, was opened January 1st. We shall publish a fuller account of it.

— W. Brewster Platt, M. D., of Baltimore, a graduate of the Harvard Medical School a few years ago, was last month admitted a Fellow of the Royal College of Surgeons, England.

— The Cartwright Lectures for 1884 will be delivered by Prof. Burt G. Wilder, M. D., of Cornell University, at the hall of the Young Men's Christian Association, corner of Twenty-Third Street and Fourth Avenue, New York, on the evenings of February 2, 4, and 6, 1884. The general subject will be Methods of Studying the Brain.

— The following are the lecture arrangements at the London College of Physicians for 1884: The Gulstonian Lectures will be delivered by Dr. Clifford Allbutt on March 7th, 12th, 14th, the subject being Chapters on Visceral Neuroses. The Croonian Lectures will be delivered by Dr. Hughlings-Jackson, on March 19th, 21st, 26th; subject, Evolution and Dissolution of the Nervous System. And the Lumleian Lectures by Dr. James Andrew, March 28th, April 2d, 4th; subject, The Ætiology of Phthisis.

— *Virchow's Archiv* for December contains a summary, by Dr. Uhde, of Braunschweig, of the examinations of pork for trichinæ in the Duchy of Brunswick. The total number of carcasses of swine examined was 120,766. Of these eleven were found to contain trichinæ, and 109 were otherwise diseased.

— The statue of Liebig, at Munich, has been mutilated by the pouring over the entire left side of the figure of some dark-colored liquid, which has corroded the marble. The perpetrators of the outrage have not been discovered.

— Chloroform water, which is much employed in the Paris hospitals, is prepared as follows, says *L'Union Médical* (November 22d), according to Professors Lasègue and Regnauld's formula: An excess of chloroform is poured into a bottle three parts filled with distilled water, and, after repeated shaking, the mixture is allowed to stand until the extra chloroform is deposited, and the liquid quite clear. The transparent portion is then to be removed by a siphon, forming a saturated solution of ten grammes of chloroform per litre. Applied on compresses, either in its pure state or diluted with a half or its whole weight of water, it is found to relieve superficial pains; but when these are more deeply situated, a very hot linseed-meal poultice is first applied, which is afterwards replaced by the compress of chloroform water. Active revulsion is thus produced, which relieves the pain. Associated with a weak solution of opium it relieves vague dental pain; and with syrup of morphia it is successfully given internally for various forms of malaise from indigestion, such as gapings, eructations, sense of weight, etc. It is also useful as a palliative in cancer of the stomach.

— Dr. Sedan (*Gazette des Hôpitaux*, September 15th) reports the case of a young man, nineteen years of age, who for nine years was in the habit of taking daily between one hundred and one thousand grammes of ether. When first seen by Dr. Sedan, at ten years of age, he had anæmia, with a souffle accompanying the first sound of the heart, but preserved nevertheless a very satisfactory general condition. He became one of the most promising students of the Lyceum, was quick, brilliant, intelligent, laborious, and successful. He confided to Dr. Sedan that he drank ether, and that was the secret of his success; he reasoned like a man, and promised not to use the stimulant except to assist the efforts of his intelligence. From that time he commenced increasing amounts of ether, twenty to thirty, fifty, eighty, one hundred grammes a day, and as much at night in vapor. Still he was at the same time engaged in working out the most difficult questions in the higher mathmatics. Neither parental authority nor medical advice availed to break him of the habit. He finally consumed nine hundred to one thousand grammes a day, mostly by the mouth. He was undersized, and with a feeble constitution. No immediate disturbance showed itself at first, and he finally died of mitral insufficiency. During the last year of his life he used both ether and morphia subcutaneously.

— The English census reports show that the proportion of the blind to the population has not only decreased with each successive enumeration since 1851, in which year account of them was taken for the first time, but the decrease in the decade ending in 1881 was much greater than in either of the preceding intervals. The number of cases in 1881 was 22,832, which was one blind person in every 1138.

NEW YORK.

— At the first meeting of the Academy of Medicine in the new year, held January 3d, the following officers, all New Code men, were elected: Vice-President, Dr. Robert F. Weir; Member of the Board of Trustees, Dr. Cornelius R. Agnew; Treasurer of the Board of Trustees, Dr. Frederick A. Castle; Member of the Committee on Admission, Dr. Daniel Lewis; Member of the Committee on Ethics, Dr. C. Dixon Tarley; Member of the Committee on Education, Dr. W. Gill Wylie; Member of the Committee on Library, Dr. Abram Jacobi. At the same meeting a very fine life-size portrait of the late Dr. James R. Wood,

painted by Mr. Thomas Hicks, was presented to the Academy by Dr. F. H. Bosworth, on behalf of a number of old office students of the deceased surgeon. This was followed by a memoir of Dr. Wood, by Dr. Frederick S. Dennis, after which Dr. Thomas Addis Emmet read a memoir of Dr. J. Marion Sims. The annual reports of the treasurer, the board of trustees, the treasurer of the board of trustees, the recording, corresponding, and statistical secretaries, and of the various standing committees were also read either in full or constructively by title. From them the following items of interest are taken: The receipts of the Academy for the year just closed were $4,249.57, and the disbursements $4,429.78. During the year seven resident Fellows, one non-resident Fellow, and one honorary Fellow have died, and there has been one resignation of membership. Twenty new resident Fellows have been elected. The roll of the Academy now shows 380 resident Fellows, eighteen non-resident Fellows, forty-three corresponding Fellows, and six honorary Fellows. The number of visitors during the year was 4699, and there were received 721 bound volumes, 1839 pamphlets, and 7349 copies of medical journals. The estimates of the expenses of the library for the ensuing year were as follows: for salaries $1212; journals, $650; incidental expenses, $138; total, $2000.

— The Attorney-General has begun a suit in the Supreme Court against the Eclectic Medical College of New York for the annulment of its charter and the dissolution of the corporation controlling it, on the ground that the college has been issuing diplomas in blank, and has sold them to incompetent persons who have filled them in with their own names. The County Medical Society, through its counsel, Edward C. Ripley, Esq., has been engaged since last April in tracing the history of certain diplomas issued by this college, and it is stated that the facts show that the plan of granting diplomas is as unscrupulous as that exposed and put a stop to in the American University of Philadelphia.

— The "New York Anthropological Society" was organized December 28th, with the Rev. Dr. E. P. Thwing as president, Dr. R. Ormiston vice-president, and Dr. A. D. Rockwell, secretary.

— At their last meeting the Aqueduct Commissioners decided to construct the new aqueduct of the size of fourteen feet internal diameter, and that its northern terminus should be at the present Croton dam. The construction of the Quaker Bridge dam, which is designed to form a reservoir capable of holding 32,000,000,000 gallons of water, has not yet been definitely determined upon.

— The amount of the collections on Hospital Saturday and Sunday has not yet been announced; but, on account of the more complete and extended organization of the movement this year, it is supposed that it will be largely in excess of the sum contributed in 1882. The "Hymn for Hospital Sunday," composed by a clergyman, was sung in a number of churches on the 30th of December.

— Dr. E. Darwin Hudson has been appointed a visiting physician to Bellevue Hospital.

Correspondence.

HOSPITAL ABSENTEEISM.

MR. EDITOR, — I have read with interest the communication in your journal signed "Nestor," on the subject of medical absentment from hospital duties; and while I agree in the main with the principles therein expressed, yet I think there is another side of the question which deserves consideration. I too have done my full share of hospital work, and while I have fully appreciated the honor and responsibility of a position on the staff of a public medical institution, yet have I never failed to take a reasonable respite from my work at some period of my term of service, not only for the sake of rest, but also to afford my juniors in the out-patient department opportunities of becoming familiar with duties which some day must devolve upon them.

I fail to see that dignity or duty suffer any detriment from my so doing. A fortnight's vacation during one's term of service, on the contrary, is a distinct benefit in more ways than one; and I venture with all due respect to assert that had "Nestor" pursued this course, his own health would have been better, and that of his patients no worse. SENEX.

HOSPITAL ABSENTEEISM.

MR. EDITOR, — Can you pardon the follies of youth? If so, extend your clemency to me, for I have yielded to the temptation to burst into song, and express "Nestor's" sentiments on the subject of medical absentees in poetic patter. Should my effort find admirers, please inform them that I am willing to exchange the copyright of my song for an engraving or colored print (composition of subject must include at least one cadaver) for office or waiting-room decoration.

THE SONG OF THE ABSENTEES.

Let others auscult or percuss,
Examine all sorts of secretions
Of ill-smelling patients who fuss,
Prescribe building-up and depletions.

Let others work hard and perspire,
Pant, struggle, e'en fall in the race,
While we pack our traps and retire,
Assured in advance of a place.

While we roam the hills or the waters,
Intent upon pleasure or gain,
Let them stay the slaughter of paupers
Who in the hot city remain.

To them be the privilege given
Of hospital work without stint;
Let them lay up riches in heaven,
But give us the credit in print!

GAMBOGE.

SEA-WATER FOR STREETS, SALT ON STREET RAILWAYS.

BOSTON, *January* 3, 1884.

MR. EDITOR, — Can you tell us what there is "*injurious to health*" in watering streets with sea-water, or in putting salt on street railway tracks? By rapid thawing of snow or ice there may be produced too great cold perhaps for horses' feet, which, however, do not ordinarily come very near the rails; or possibly the salted water may be irritating to sore or tender

hoofs. But if such be the case, what has it to do with "the public health?" How can the public health be injured by watering streets with sea-water in summer, when all are urged to dip themselves into the ocean itself for health's sake; or by the running off into drains and cesspools in winter of salted ice-water slightly ferrated by the iron rails of the railway?

One would naturally think these things innocent; and yet they have frequent denunciations from Boards of Health; and courts are besieged to put a stop to such proceedings.

Please, Mr. Editor, enlighten on these points frequent inquirers and NESCIENS.

DOWNWARD DISPLACEMENT OF THE TRANSVERSE COLON.

MR. EDITOR, — Dr. Thomas will find, in Bright on Abdominal Tumors, Sydenham's Society's edition, pages 247–250, some remarks on displacement of the transverse colon, with a diagram of a case (Fig. 67), exactly like those reported by him. Esquirol, Maladies Mentales, Paris, 1838, tome i., page 462, speaking of the same lesion in insanity, says: "Quelquefois le colon transverse descend en forme d'arc au dessous du pubis et jusque dans la cavité pelvienne." Both authors give cases of the various other forms of displacement, but not of the particular U-shaped variety here spoken of. I have had no time to look into the subject any farther, but think the references above given must show that it is by no means so rare as the Philadelphia gentlemen seem to suppose.

Yours respectfully,
EDWARD T. WILLIAMS, M. D.

January 4, 1884.

Miscellany.

GOVERNOR ROBINSON'S INAUGURAL.

HEALTH, LUNACY, AND CHARITY.

THE following is the portion of his excellency Governor Robinson's inaugural address relating to the above important subjects: —

The Legislature of 1879 accomplished a thorough reorganization of the administration of the public charities, — abolishing some boards, consolidating others, and simplifying the whole system. Undoubtedly a considerable saving in the operation of the official machinery was effected. The Board of Health, Lunacy, and Charity, as then and now constituted, consisting of nine persons, is given general supervision over the State lunatic hospitals, the State Almshouse, the State Workhouse, the State Primary School, the State Reform School, and the State Industrial School. Other powers, ample and specific, are granted, enabling the Board to hold substantial control over those institutions and over other matters committed to it. The Board also takes cognizance of the interests of health and life among the citizens of the Commonwealth, and acts as Commissioners of Lunacy. Surely no board in this State ever was intrusted with graver concerns and heavier responsibilities. I am sure that most faithful, disinterested, and efficient service, without a dollar of compensation, has been rendered by the members of that Board, and they are fairly entitled to the appreciation and gratitude of the citizens of the State and, most of all, of the poor unfortunates whom the charities of Massachusetts support and save.

The consolidation effected in 1879 was not brought about without opposition from very wise and devoted persons, many of whom, if not all, still believe that no satisfactory work can be done until a separation is made, and there are three boards or commissions instead of one. There is an apparent incongruity in the present arrangement, it is true; but in many particulars the three branches are closely allied, and may be harmoniously and effectively worked together. It is not possible that each member on such a board can be an expert in all the matters before it. They must make investigations and reach results through subcommittees; and yet it is quite common in public affairs to manage important interests in just this way. I have been urged to recommend to you an abolition of the Board, and the creation of two or three in its stead. But after much reflection and extended inquiry I must withhold that recommendation for the present. It is plain that the adoption of the suggested plan would necessitate payment of additional salaries and other outlay. Though there is much in the propositions that I approve, still I am persuaded that the people, whose servants we are, look with suspicion and disfavor upon the needless multiplication of boards, commissions, and agencies, and approve the practice of the strictest economy in their behalf. My own inclination at present would be toward a still further reduction and simplification that would bring all our public institutions more directly under the supervision of one board; but my experience and observation in the management of so great trusts will not, in my judgment, justify me in recommending radical and sweeping changes. Let the work of the Board be searchingly scrutinized, not only in its economical bearings, but as well in its response to the demands of humanity and justice. Political partisanship has no proper place in such an organization, or in the examination and estimate of its transactions. Whatever else we do, let us see to it that we keep politics out of the charities.

I am reënforced in the conclusions already stated, in the fact that unusual interest has been excited during the last year in the official acts of the Board, and in the conduct and condition of the various institutions under its charge; and the report of the Board, presenting their views and conclusions, will attract extraordinary attention. It is but justice that we consider it. Moreover, a joint special committee was created by your immediate predecessors to investigate several of the institutions; to consider plans and theories; to examine institutions in other States, and to present their findings and conclusions to you. Their report will undoubtedly give you valuable information and help. I desire to suggest that I fear there may be a tendency to an unnecessarily large force of clerks, agents, assistants, superintendents, and employees appointed by the Board under statute authority. May not the departments of the out-door poor and the in-door poor be united, saving the compensation of several persons, and in no degree impairing the efficiency of the service? If you agree with me, this retrenchment can be effected without difficulty. It is probable that other savings can be accomplished, and in that direction I shall turn my attention and now invite yours. I ask your attentive consideration to the several reports sub-

mitted by the boards of trustees. They speak from an abundant observation and experience.

LUNATIC HOSPITALS.

There is an imperative demand for increased accommodations for the insane. The hospitals are crowded, and hundreds of inmates are compelled to occupy temporary cots, or beds in the corridors and upon the floors. I believe great economy of room is possible under a wise system of classification, separating the harmless, the criminal, and the dangerous, and other improved arrangements which professional knowledge and practical experience will advise. Let us adopt any and every reasonable expedient before we enter upon the construction of another hospital, or incur large expense in experiments in one field or another to test a theory. The financial affairs of the hospitals are reported in excellent condition. The surplus accumulated at Taunton, Worcester, and Northampton has been increased; while at Danvers the treasurer's report shows a balance of $1172.14, so that the $10,000 appropriated for an anticipated deficiency has been added to the surplus.

MEETING OF BOARD OF HEALTH, LUNACY, AND CHARITY. RESIGNATION OF SUPERINTENDENT OF OUT-DOOR POOR.

DR. H. B. WHEELWRIGHT'S resignation as Superintendent of Out-door Poor was accepted, to take effect February 1st. Messrs. Fallon, Noble, Dean, Haggett, and Walcott voted to accept the resignation, although Dr. Wheelwright wished the term extended to April 1st. Meanwhile his department will be put in charge of the charity committee of the board. There was some animated discussion on this subject, but the result showed a large majority against the doctor. Ex-Governor Talbot intimated that those who wished to press this matter were active from personal spite. Colonel Haggett said he should throw the remark back in his face, and that he was not actuated by personal spite. Tewksbury has 1170 inmates, and will take no more at present. Miss E. C. Putnam was formally thanked for her efforts to reclaim wayward children by her plan of auxiliary visitors. Messrs. Talbot and Walcott were instructed to take advice of counsel as to having the State pay the Boston City Hospital for patients sent there.

THE CHILDREN'S HOSPITAL.

THE fifteenth annual meeting of the managers of the Children's Hospital was held in this city, in December, and the following officers were chosen for the ensuing year: President, Robert C. Winthrop; Vice-President, John C. Phillips; Treasurer, John G. Wetherell; Secretary, Francis H. Brown; Managers, Charles Faulkner, William Ingalls, Charles H. Fiske, Jeremiah Abbott, Alanson Bigelow, J. P. Spaulding, H. G. Pickering, Roland C. Lincoln, J. Montgomery Sears, Oliver W. Peabody, Phillips Brooks, Charles L. Young. The managers, in their annual report, say that the past year has been in many respects experimental in the management, care, and testing of the new building, and that they are well satisfied with the result. The entire cost of the building, including furniture and equipment, has been about $125,000. It is now wholly paid for. The hospital has now accommodations for sixty patients, which is double the number receivable in the house formerly occupied on Washington Street. Each of the two wards has twenty beds; there are five rooms for private patients, and three rooms designed for special cases, for those which need the quiet of a separate apartment. This year the aggregate of the house bills (as also the total cost of the maintenance of the hospital) has been double that of the previous year. This is due to the increase in the number of employees, and to the cost of their wards. The average daily number of children approximately in the former building was eighteen, and the annual expenses were, exclusive of rent, about $7500, making the daily cost for each patient about $1.14. In the present building the average has been thirty-seven patients per day, and the year's expenses have been $16,501.28, making the daily cost for each patient about $1.22. This record has been compared with those of similar institutions in Massachusetts, and the comparison is very favorable and satisfactory. The number of children received and treated in the wards during the year is 279, and the total number since the establishment of the hospital is 2033; in the out-patient department about 1000 in the last year. The report acknowledges aid received from the Ladies' Aid Association, the Sisters of St. Margaret, and others, and speaks appropriately of the deaths of Nathaniel Thayer, formerly president, and of Isaac Thatcher.

SURGEON-GENERAL HOLT.

DR. A. F. HOLT, of Cambridge, has been appointed Surgeon-general on the staff of Governor Robinson, and has accepted the position. Dr. Holt was graduated in medicine at the University of Vermont in 1860, and enlisted in April, 1861, as a private in a Cambridge company, for which the claim is made that it was the first raised, and which became Company C of the Third Volunteer Regiment. Returning home at the end of his three months' service he was made assistant surgeon of the Thirtieth Massachusetts Regiment. A year later he was surgeon of the First Texas Cavalry, then major and lieutenant-colonel of that organization, of which he was in actual command at the close of the war. His military career was distinguished for bravery and he was made the subject of a complimentary general order from the Department of the Gulf for his courage in bearing away the wounded from under fire. Since the war Dr. Holt has been engaged in general medical practice in Cambridge, where he has filled the office of City Physician. He has been medical examiner since 1879, receiving his commission from Governor Talbot. We understand that his excellency has chosen to make appointments to his personal staff from those who saw actual service during the war, and in his selection of Dr. Holt he has a surgeon-general who by personal and professional qualities will ably fill and adorn the honorable position.

— A correspondent of the *New York Medical Journal*, December 29th, narrates the case of a young man in whose rectum a hard, green pear, measuring three and a half inches by two, had been placed by companions while he was in a state of intoxication. It was removed by lithotomy forceps (the patient being in Sims' position) with some hæmorrhage and temporary paralysis of the sphincter ani.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 29, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	563	197	18.16	17.76	.89	7.48	1.78
Philadelphia	846,984	425	149	20.21	11.75	2.82	10.58	3.29
Brooklyn	566,689	234	79	14.52	14.52	8.54	5.12	4.70
Chicago	503,304	208	86	24.48	7.68	5.28	10.08	4.80
Boston	362,535	209	69	21.03	12.43	2.82	9.56	1.43
St. Louis	350,522	143	51	23.10	10.50	2.10	12.60	4.20
Baltimore	332,190	197	81	28.56	13.77	1.51	11.73	3.02
Cincinnati	255,708	89	28	19.04	13.44	8.96	4.48	—
New Orleans	216,140	150	48	24.00	10.66	2.00	4.00	.66
District of Columbia	177,638	—	—	—	—	—	—	—
Pittsburg (1883)	175,000	56	12	10.74	14.32	5.37	3.58	—
Buffalo	155,137	57	23	19.25	14.00	1.79	7.16	5.37
Milwaukee	115,578	47	26	25.56	8.52	—	19.78	9.89
Providence (1883)	116,755	49	10	10.20	18.36	2.04	4.08	2.04
New Haven (1883)	73,000	—	—	—	—	—	—	—
Charleston	49,999	37	13	21.60	10.80	2.70	5.40	—
Nashville	43,461	16	4	18.75	12.50	—	6.25	—
Lowell	59,485	29	9	13.80	13.80	3.45	3.45	—
Worcester	58,295	20	11	20.00	8.00	8.00	12.00	—
Cambridge	52,740	19	7	10.52	21.04	5.26	—	—
Fall River	49,006	26	6	19.25	19.25	—	11.55	—
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	16	6	6.25	6.25	6.25	—	—
Springfield	33,340	16	3	37.50	18.75	6.25	12.50	—
Salem	27,598	9	1	11.11	11.11	—	11.11	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	7	0	—	28.56	—	—	—
Holyoke	21,851	8	1	12.50	12.50	12.50	—	—
Chelsea	21,785	12	3	8.33	16.66	—	8.33	—
Taunton	21,213	7	2	28.56	—	—	—	—
Gloucester	19,329	2	2	—	—	—	—	—
Haverhill	18,475	—	—	—	—	—	—	—
Newton	16,995	0	0	—	—	—	—	—
Brockton	13,608	5	1	20.00	20.00	—	20.00	—
Newburyport	13,537	3	0	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	4	1	—	—	—	—	—
Sixty-four Massachusetts towns	248,988	82	10	15.85	15.41	2.45	15.41	—

Deaths reported 2725 (no reports from District of Columbia and New Haven): under five years of age, 939: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 543, consumption 419, lung diseases 400, diphtheria and croup 226, typhoid fever 70, scarlet fever 67, diarrhœal diseases 52, measles 35, malarial fever 35, cerebro-spinal meningitis 16, erysipelas 14, whooping-cough 12, puerperal fever 10, small-pox six. From *diarrhœal diseases*, New York 18, New Orleans nine, Boston seven, St. Louis four, Baltimore, Cincinnati, Charleston, and Fall River two each, Philadelphia, Brooklyn, Chicago, Lowell, Cambridge, and Taunton one each. From *measles*, Baltimore 16, New York five, Philadelphia four, Brooklyn three, Buffalo two, Chicago, New Orleans, Pittsburg, Milwaukee, and Lowell one each. From *malarial fevers*, New Orleans 12, New York seven, Baltimore five, Brooklyn four, Chicago three, St. Louis two, Charleston and Nashville one each. From *cerebro-spinal meningitis*, Fall River three, New York, Cincinnati, and Springfield two each, Philadelphia, Milwaukee, Charleston, Nashville, Lowell, Salem, and Taunton, one each. From *erysipelas*, New York eight, Philadelphia and Boston two each, Cincinnati and New Orleans one each. From *whooping-cough*, Boston three, New York, Philadelphia, and Baltimore two each, Brooklyn, Chicago, and New Orleans one each. From *puerperal fever*, Chicago three, Philadelphia, Boston, Buffalo, Milwaukee, Providence, Charleston, and Springfield one each. From *small-pox*, Philadelphia four, New Orleans two.

Seven cases of small-pox were reported in St. Louis; diphtheria 26, scarlet fever 25, and typhoid fever 10 in Boston; scarlet fever 17, and diphtheria six in Milwaukee.

In the 79 cities and towns of Massachusetts, with an estimated population of 1,170,947 (estimated population of the State 1,922,530), the total death-rate for the week was 21.05 against 18.60 and 21.60 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending December 15th, the death-rate was 22.6. Deaths reported 3735: acute diseases of the respiratory organs (London) 471, measles 125, scarlet fever 105, whooping-cough 80, fever 59, diphtheria 40, diarrhœa 33, small-pox (London seven, Birmingham, Liverpool, and Sunderland two each) 13. The death-rates ranged from 13.9 in Portsmouth to 29.2 in Manchester; Bradford 16.1; Leicester 20.5; Sunderland 20.7; Sheffield 21; London 22.7; Nottingham 23.6; Birmingham 24.3; Leeds 25.1; Liverpool 25.3. In Edinburgh 20.8; Glasgow 26.3; Dublin 32.1.

For the week ending December 8th, in 170 German cities and towns, with an estimated population of 8,725,681, the death-rate was 23.4. Deaths reported 3922; under five years of age, 1711; consumption 563, lung diseases 465, diphtheria and croup 281, diarrhœal diseases 124, scarlet fever 92, measles and rötheln 68, whooping-cough 52, typhoid fever 48, puerperal fever 19. The death-rates ranged from 30.5 in Dortmund to 14.1 in Kassel; Königsberg 29.1; Breslau 26.9; Munich 27.3; Dresden 26.5; Berlin 25.2; Leipzig 24; Hamburg 23.5; Cologne 22; Frankfort a. M. 16.0; Strasburg 25.4.

For the week ending December 8th, in the Swiss towns, there were 27 deaths from lung diseases, consumption 22, diarrhœal diseases 17, whooping cough four, diphtheria and croup two, typhoid fever two, puerperal fever one. The death-rates were, Geneva 13.3; Zurich 12; Basle 17.5; Berne 27.1.

The meteorological record for the week ending December 29th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date. Dec., 1883.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7. 23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 23	30.604	2	4	12	56	64	79	66	NW	NW	NW	20	3	4	C	F	S	—	—
Mon., 24	29.930	21	34	2	100	100	90	97	NW	NW	NW	3	10	3	S	Sl	O	—	—
Tues., 25	29.935	29	34	24	77	95	100	91	NW	NW	NW	5	3	10	O	O	S	—	—
Wed., 26	30.141	31	37	26	90	79	88	86	NW	S	S	3	3	2	O	O	O	—	—
Thurs., 27	29.666	40	49	30	80	100	100	93	SE	SE	SW	6	14	7	O	G	R	—	—
Fri., 28	29.524	26	48	21	77	40	51	56	W	W	W	29	28	15	O	C	C	—	—
Sat., 29	30.164	27	35	19	70	60	64	65	SW	SW	W	4	14	5	C	C	C	—	—
Mean, the Week.	29.995	25	34	13				79										23.30	1.06

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening; Sl., sleet.

THE WORSHIPFUL COMPANY OF GROCERS, LONDON. ORIGINAL RESEARCH IN SANITARY SCIENCE.

FIRST QUADRENNIAL DISCOVERY-PRIZE OF £1000. 1883–1886.

SUBJECT to the conditions of the Company's scheme, the Court now announces, as the matter of competition for this Prize, the following Problem: —

"To discover a method by which the Vaccine Contagium may be cultivated apart from the animal body, in some medium or media not otherwise zymotic, — the method to be such that the Contagium may by means of it be multiplied to an indefinite extent in successive generations, and that the product after any number of such generations shall (so far as can within the time be tested) prove itself of identical potency with standard Vaccine Lymph."

The Prize is open to universal competition, British and Foreign. Competitors for the Prize must submit their respective Treatises on or before the 31st of December, 1886; and the award will be made as soon afterwards as the circumstances of the competition shall permit, not later than the month of May, 1887. In relation to the Discovery-Prize, as in relation to other parts of the Company's Scheme in aid of Sanitary Science, the Court acts with the advice of a scientific Committee, which at present consists of the following members: John Simon, C. B., F. R. S.; John Tyndall, F. R. S.; John Burdon Sanderson, M. D., F. R. S.; and George Buchanan, M. D., F. R. S. All communications on the subject are to be addressed to the Clerk of the Grocer's Company, Grocers' Hall, London, E. C.

GROCER'S HALL, *May* 30, 1883.

For the Conditions of Candidature and Award, see underneath.

QUADRENNIAL DISCOVERY PRIZES IN SANITARY SCIENCE.

Purpose of the Foundation. — (1.) The Quadrennial Discovery-Prize of £1000 is intended to reward original investigations which shall have resulted in important additions to exact knowledge in particular, previously defined, sections of sanitary subject-matter.

(2.) During the pleasure of the Court, the Court will, once in four years, propose some subject for investigation; and a period of at least three and a half years will on each occasion be allowed for the investigation of the subject that has been proposed.

(3.) In determining, on each occasion, what particular subject shall be proposed for the Prize, careful regard will be had to all the scientific circumstances of the time; both as the urgency of existing needs for particular kinds of knowledge, and as to the expectations which may reasonably be held that discovery in the needed kinds of knowledge can be made within the allowed period.

Candidature for the Prize. — (4.) The Discovery-Prize will be open to universal competition, British and Foreign.

(5.) The period allowed for the competition will begin with the day of announcement of the subject for investigation, and will end with the last day of the fourth following December.

(6.) Any person who desires to be regarded as a candidate for the Prize must deliver, or cause to be delivered, at the Hall of the Company, within the allowed period, a letter in which he declares himself to be a candidate for the Prize, and the treatise on which he bases his candidature; such letter, and such treatise, to be addressed to the Clerk of the Company, who will give a dated receipt for the same. The competition-treatise of a candidate may, if the candidate so prefer, be delivered in successive parts, each bearing its proper date.

(7.) Each treatise in competition for the Discovery-Prize must be an original work by the candidate who sends it in. It may be a treatise which he has published at any time within the allowed period, or may be a treatise which he has not previously published.

(8.) Although candidature is not restricted to any one nationality, all treatises, and all communications with the Company in relation to them, must be in the English language. Translations into English of competition treatises published (within the allowed period) in a foreign language will be received on a like footing with treatises originally in English.

(9.) All treatises must be in print.

(10.) Each treatise must bear the name of its author.

(11.) Any particular candidate may be required to demonstrate practically to the Court, or to persons acting on their behalf, any fact or result which he claims to have discovered.

(12.) Candidature will be held to imply that the candidate undertakes to accept as regards himself the award which the Court shall make.

Award of the Prize. — (13.) The Discovery-Prize being intended to promote the fullest possible elucidation of the given subject, the respective merits of candidates will be rated by that standard; and, if the Court be advised that the most meritorious candidate has produced an original solution of the main scientific problem or problems involved in the matter of the competition, the Court will award to him the entire Prize.

(14.) Should the Court be advised that no candidate has solved the main scientific problem or problems, but that valuable progress towards the object has been made by one or more of the candidates, or that collateral discovery valuable to sanitary science has been incidentally made by some candidate in his prosecution of the main research, the Court will apply such portion of the Prize as they may see fit in recognition of merits thus brought to their notice.

(15.) In estimating the originality of treatises, the Court will have regard not only to the state of knowledge which existed at the time when the subject for investigation was announced, but also to such later advances of knowledge as may have been made up to the time when the treatises were sent in.

(16.) Where two or more candidates equally claim to have made discovery in the subject-matter of the Prize, further information may be required of them in support of their respective claims, and the Court will judge between the claims as they shall think right. Each candidate will have been at liberty to notify to the Court at his own time any discovery which he believes himself to have made. — See above, § 6.

(17.) Neither the Prize, nor any portion of it, will be awardable to any person who has not formally declared himself a candidate for the Prize. — See above, § 6.

(18.) The awarding or withholding of the Discovery-Prize is to be entirely in the discretion of the Court, and the Company is not to be under any legal responsibility with regard to the same.

Original Articles.

CASES OF LESION OF THE BRAIN CORTEX ATTENDED WITH UNILATERAL SYMPTOMS.

BY S. G. WEBBER, M. D., BOSTON.

CASE I. GASTRALGIA; SYMPTOMS OF CEREBRAL LESION FOLLOWING VOMITING; UNILATERAL SPASM; MENINGEAL HÆMORRHAGE.

In February I was asked to see Mrs. W., a friend of one of my patients. She seemed to be suffering from a slight "cold," and was soon better, but remained rather weak. March 9th I saw her again. She was then suffering from an eruption which resembled in some respects urticaria, a local swelling of the skin, slightly red, which itched and smarted. There had been disturbance of the stomach for a few days previous, but not sufficient to attract much notice, simply a sense of distention and flatulence. The eruption soon disappeared, and later reappeared; the gastric distress was temporarily relieved, but two days later she had much trouble with wind in the stomach; the temperature was 100.4° F., the pulse 102; there was also nausea and an aversion to food. The distress from flatulence was not constant, but recurred at intervals, and continued several hours; sometimes the ingestion of food seemed to give rise to an attack. These were relieved by spirits of chloroform, and by careful feeding with milk, lime-water, and a very small amount of brandy, she gained steadily, and by the 17th was receiving about two quarts of milk in twenty-four hours. On the 17th there was an attack of flatulence, during which she strained hard to raise the gas, and had a pain on the right, just below the breast.

From the 18th to 22d the right side and back, to right of the spine, were the seat of most distress; occasionally the flatulence gave trouble. There was tenderness at first just below the right breast, then over the lower edge of the ribs, finally below the ribs, near the spine. All motions of the body were painful. Physical examination of the lungs showed nothing abnormal. The urine was normal. Once after taking tincture of aconite on account of dryness of skin and slight elevation of temperature the pulse became irregular. The amount of food taken at this time was very small. The pulse ranged from 96 to 120. The temperature was about 100° F., once ran up to 102° F. She was fed by enema, an egg beaten up with pepsin being given every four to six hours.

From the 20th till her death Dr. Mack, of Salem, her family physician, saw her nearly every day, and made valuable suggestions in regard to treatment.

The pain in the side was diminishing, and the amount of morphia was decreased. She seemed to be gaining. On March 22d, while straining in vomiting, she felt a sharp, severe pain in her neck and head. This was followed by very severe headache and an unwillingness to move the head, and later an attempt to move the head gave rise to expressions of pain, and every passive motion of the head was resisted.

From the 22d to 28th there was a gradual failure. Intelligence gradually diminished; she lay without speaking unless spoken to, and then answered very briefly; at length there was almost no response to questions, but she seemed to know her daughter; she moved her hands, drew up both legs or straightened them out at will, evidently suffered from distress in her head, slept only for a short time without waking, took a larger amount of food, had a temperature generally below 100° F., but in the evening of the 27th it was 102° F.; pulse about 90 to 96; respiration 22 to 30.

On the 28th she showed almost no sign of consciousness, would swallow liquids which were placed in her mouth, but seemed unable to swallow solid food. It was necessary to catheterize her. During the morning visit the left pupil was larger than the right; both responded to light. Respiration was occasionally interfered with; in the afternoon it ceased for a few seconds, and she became cyanotic. At six P. M. pulse was 120; temperature 102° F.; respiration 40. At eight P. M. she had had three spasms, and had a fourth during the visit. Both eyes were open and in constant vibratory motion; the face, especially the left side, was contorted; both eyes turned towards the left in extreme conjugate deviation; she raised the right hand, trembling, towards the head. The left hand and leg did not move sufficiently to disturb the bedclothes if at all. The spasm continued less than a minute. After it was over the left hand and leg were found to be completely paralyzed. There was no reflex action on irritating the skin of hand or foot, though on the right reflex action was perfect. Pulse was 120; respiration 40; temperature was not taken.

From this time the spasms were more or less frequent until the twelve hours preceding death, when there were none. After many of the spasms respiration ceased for one minute or longer, and the skin became very cyanotic. There was no gesture showing any sensibility excepting once when the position of the head was changed, she groaned and put her right hand to her head, and once when a subcutaneous injection was administered in the right arm she made a motion showing that she felt the prick. The convulsions underwent a slight change, the left hand and arm were more agitated, the right less. I saw one which began with opening the eyes; rapid convulsive agitation of the lids, of the left side of face and left arm, and to a less degree of the left leg; the whole body was moved, both eyes turned to the left as far as was possible, the head was not turned, the right side was much less agitated than the left. When the spasm ceased both eyes returned to the right and respiration ceased for nearly a minute, the skin became deeply cyanotic, and after breathing was reëstablished the dark color faded out very slowly. The pulse varied from 100 to 120; the respiration between the convulsions was about 36; the temperature when taken on several occasions varied little from 100° F.

Death occurred quietly on the morning of March 31st.

The autopsy was made two hours post mortem. There was a very abundant development of adipose. The heart was small; there were three or four small rough nodules on the mitral valve, not recent; the lungs were healthy, a few small ecchymoses under the pleura. Stomach, many small ecchymoses in the mucous membrane. Liver, spleen, intestines, normal; a medium-sized calculus in the pelvis of the right kidney.

The skull was of normal thickness, no undue adhesion of dura mater. Under the dura mater, between that and the pia mater on the right side over most of the posterior two thirds of the right hemisphere, was a

[1] Read before the Boston Society for Medical Observation, November 5, 1883.

clot of blood (Fig. 1); this did not reach quite to the vertex, extended into the middle fossa at the base, reached as far forward as the posterior extremities of the second and third frontal convolutions, as far back as the perpendicular fissure above, and extended under the occipital lobe below, but not to its posterior extremity.

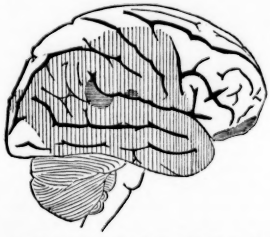


FIG. 1. Horizontal shading below fissure of Sylvius shows location of hæmorrhage; above fissure of Sylvius, the small spot of softening; perpendicular shading shows extent of meningeal hæmorrhage.

The first frontal convolution and the upper part of the superior parietal lobule were not covered by the clot.

The origin of the hæmorrhage was in the posterior and external part of the temporal lobe, near the point at which the supra-marginal gyrus merges into the first temporal convolution; this region was torn up by the blood which had broken through near the posterior extremity of the fissure of Sylvius so as to give rise to the meningeal hæmorrhage. The cerebral substance around the primary clot was softened and discolored to a limited extent, but the clot was firm, about the size of a walnut, and had undergone almost no change. On the upper side of the fissure of Sylvius in the anterior part of the supra-marginal gyrus was a small spot of softening, but no hæmorrhage. No blood was found in the ventricles.

The vessels, both arteries and veins, in the membranes were filled with firm dark coagula. The veins on the right side were very full. The arteries at the base were small, with extremely thin, delicate walls; no atheroma.

The ganglia at the base were healthy; in the white substance on the right side were several spots of punctiform hæmorrhages; one small spot, very superficial, was also noted near the acoustic striæ in the floor of the fourth ventricle.

No miliary aneurisms could be discovered with the naked eye.

This case is of interest in several particulars. The pain in the right side and back during a part of the time may well have been caused by the calculus in the pelvis of the right kidney, displaced perhaps by severe straining during an attack of flatulence.

At first I could discover nothing but acute gastralgia or dyspepsia. I examined carefully with a view of discovering some other condition of ill health, but could not; a decided improvement led to an expectation that the patient would recover until the attack of vomiting on the 22d, which was followed by the severe pain in the head. It was by no means easy to decide where or how severe the mischief was, there was no paralysis, there were no cerebral symptoms excepting the pain and the rather rapid loss of mental power. The patient was naturally taciturn, rarely volunteered any remark, and when ill more quiet than usual; it was not considered very singular that she said little after the 22d, but in a day or two it was evident that she received fewer impressions than normal; she did not answer when addressed, but knew her friends, and could be easily aroused to partial consciousness. With the light furnished by the autopsy it seems probable now that there was word dumbness, and that the indifference was due to the loss of power to understand what was said. As this was not suspected at the time she was not examined with a view to discover such a condition.

When the convulsions began on the 28th the lesion was more clearly revealed. I thought then that there was probably meningeal hæmorrhage, and as the left side was paralyzed I located it on the right, yet the convulsions at first seemed most marked on the right. The left side of the face was convulsed, the right hand was tremblingly raised to the head. There might now be a reasonable doubt whether the motion of the right hand at this time was truly convulsive, whether it was not a voluntary or at least a reflex action, an attempt to carry the unparalyzed right hand to the convulsed side of the face. The next day the spasms affected the left arm, and the right side was scarcely moved during the convulsions.

The conjugate deviation of the eyes during the convulsions towards the convulsed and paralyzed side, in the interval between the convulsions away from the paralyzed side, caused me to definitely localize the lesion above the crura cerebri, that is, I thought the hæmorrhage was over the surface of the right hemisphere. Of course I did not attempt to diagnosticate the extent of the hæmorrhage; it was certain that the motor centres were irritated. It is interesting that the centres for the face and arms were covered by the clot, but the centres for the lower extremity were almost entirely free, and the spasmodic action was very slight in the leg.

The remarkable condition of the arteries and veins, filled with coagula, and the small ecchymoses in the brain and other organs, is explained by the interference with respiration. Several times she seemed to be dead, but by artificial respiration life was prolonged a few hours. The disturbance of respiration may have been due to the increase of intercranial pressure.

The above peculiarities made this case one of the most perplexing and interesting; perplexing until the spasms showed where the lesion was. Not that there was any doubt as to the presence of some kind of cerebral lesion after the attack of pain in the head, but its nature and location were in doubt.

CASE II. SPASM ON LEFT, COMMENCING IN EYES, EXTENDING TO FACE AND LIMBS. LOCALIZED MENINGITIS AND CORTICAL ENCEPHALITIS.

The second case presents symptoms very similar to those noted towards the close of life in the preceding. There is no history of the patient's condition previous to her entrance to the City Hospital, except that she had been quarreling with another woman, and was arrested for assault. In the morning she was found to be unconscious and in spasms, and was taken to the hospital. When seen about 9.30 A. M. she was unconscious, head drawn back, the back and legs were not in the position of opisthotonos. About once in a minute or minute and half occurred a convulsive seizure lasting from half a minute to a minute. The spasm com-

menced with conjugate deviation of the eyes towards the left and deviation of the head towards that side, then the left side of the face was affected, the eyelid winking rapidly, and the muscles of the lower part of the face twitching spasmodically; in a few seconds the left arm was drawn up in tonic contraction, then almost immediately it was in clonic convulsions, and finally the left leg was slightly affected. After running through the whole side the spasm soon subsided and the patient became quiet; then both eyes were turned to the right, and this conjugate deviation to the right persisted during the interval between the attacks. In the interval also the left hand was limp and fell heavily when raised; the right arm fell slowly, and once there was a spontaneous motion of the right hand.

The pupils were of moderate size, reacted slightly to light, the cutaneous reflexes were absent, the patella reflex was normal, no ankle clonus. There were such loud bronchial râles, groaning, and other noises made by the patient that the chest sounds were obscured. There was a slight œdema of the feet; the urine had a specific gravity of 1020, contained a trace of albumen, many hyaline, a few granular, casts.

By noon the convulsions had become less frequent, and by eight P. M. had ceased.

The next day the left arm was paralyzed, the eyes were turned to the left, head was still retracted, turned a little to the left; this contraction of the head was spasmodic, resisting efforts to correct the position.

She died about fifty hours after entrance.

Autopsy. Brain. On right, over posterior part of third and lower and posterior parts of second frontal convolutions, almost entirely in second and just lapping on third frontal convolution, not implicating ascending frontal, but coming up to it, was a very firm adhesion of pia and dura mater.

Moderate amount of serum in arachnoid, also moderate injection of vessels. On the right, over lower third of ascending frontal and ascending parietal, middle of first temporal and posterior part of second temporal convolutions pia had a distinctly yellow tinge. On left the whole of the third frontal convolution, and from the supraorbital, extending as far back as ascending frontal, showed a yellowish discoloration as on right. On the left, after removing membranes, the cortex over third frontal convolution in middle, fully one and one half inches antero-posteriorly, still discolored; discoloration not extending through whole of gray cortical substance. On right, on removal of pia, the spot which was adherent to dura was also adherent to the brain substance, and membranes could not be removed without damage to brain substance. The whole of the posterior part of the third and lowermost part of second frontal convolutions were yellow and flaccid as if covering a cyst, extending one and three eighths inches antero-posteriorly, and one and one quarter inches transversely. Ascending frontal and ascending parietal slightly discolored, ascending parietal rather more deeply, and at one spot cortex deeply changed. First temporal also slightly discolored, and posterior part of second temporal corresponded with discoloration seen through pia. (All this evidently an old condition.) Figs. 2 and 3.

Ventricles contained normal amount of fluid. Venæ Galeni much injected. Intra-ventricular portion of both optic thalami and anterior corpora quadrigemina had a decided yellow color. To a less extent posterior corpora quadrigemina had a yellow tint. On left side yellow discoloration in pulvinar extended half an inch deep, except at anterior portion, where it extended more deeply. On right side yellow discoloration penetrated pulvinar one eighth of an inch. Discoloration of corpora quadrigemina entirely superficial. Olfactory lobes both yellow.

No fracture of skull. Few ecchymoses of scalp.

Lungs. Old pleuritic adhesions. Posterior third of left lung acute pneumonia in second stage. Right lung acute pneumonia not so far advanced, also one inch above interlobular fissure and near posterior border of

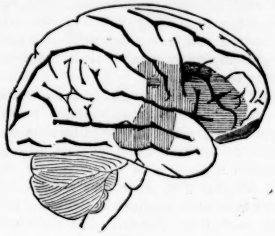


Fig. 2.

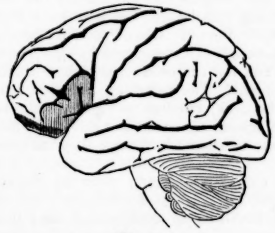


Fig. 3.

Figs. 2 and 3. Darkest horizontal shading shows the seat of firmest adhesion; lighter horizontal shading, seat of destruction of cortical substance; perpendicular shading, the portion having a yellowish tinge.

lung a recent infarction three quarters of an inch long, extending into lung in irregular conical shape.

Other organs not remarkable.

In this case by not taking into account my ignorance of the patient's previous history, and by considering that she had been in health up to the time of the first attack, I was led into error and diagnosticated an injury implicating or near the lower portions of the ascending central convolutions, or a meningeal hæmorrhage over this region. No injury to the skull could be discovered, therefore I thought it most likely there was hæmorrhage. The autopsy showed that the seat of the lesion was correctly defined, though it extended more anteriorly than was thought likely, but the nature of the lesion was different, being a chronic meningitis of long standing. The condition of the lungs was not recognized before death. The tracheal râles were so loud as to obscure the respiratory sounds, and also the convulsions attracted the greater share of attention.

Case III. Unilateral Spasm. Cortical Encephalitis.

M. F. was in the City Hospital several times. Probably in 1873 for rheumatism, though under another name; then in 1877 for intermittent fever. Again

under his later name he entered in March, 1880, having been found in his room delirious. He answered questions, but his talk was not quite intelligent. There was continuous trembling of the left arm and thigh; the pupils contracted equally; the tongue was protruded straight; there was no facial paralysis; there was a strong systolic souffle in the second intercostal space on the left and right. He had several rheumatic attacks, and was discharged relieved June 7th.

July 29th he was brought in again unconscious, said to have had several fits; he had several after entrance; the teeth were clinched, pupils contracted equally and insensible, left arm and leg twitched. In the evening he was excited and wild; the next day he was confused; right pupil was smaller than the left. He remained only two days.

October 11th he was brought to the hospital in a fit, and had many more after entrance. Twenty grains chloral and forty grains bromide potassium were given, after which the fits ceased and he slept all night.

No mention is made of a recurrence of the convulsion until October 23d, when the muscles of the left side of the face were noticed to twitch. The tongue protruded strongly to the left; the right side of the face moved a little more than the left. During the visit on the 24th he had an attack; the mouth was drawn strongly to the left, the jaws were slightly convulsed, while the left side of face, forehead, and ear twitched, the left eye was closed by spasm of the orbicularis. The right forehead and right orbicularis were also convulsed. The twitching extended to the muscles of the neck, but was not perceptible below the neck. A smart slap on the left side of the face caused the spasms to diminish, though they continued afterwards.

These convulsive seizures recurred frequently. I saw several, and it is noted a few times that there was conjugate deviation of the eyes and head to the left; the left arm and leg were sometimes contracted and tremulous. One day the twitching of face and arm was almost constant; once, later, the left side of the face was relaxed; the left eye was not closed. When seen asleep the face was quiet, on awaking the twitching returned.

The urine throughout was found to contain albumen, hyaline, and granular casts.

During the last part of his life one knee-joint became much swollen and contained fluid. Bedsores had formed, and he finally died exhausted.

Autopsy. Brain. (Figs. 4 and 5.) Right hemisphere. Membranes adherent over the cortex on both sides of perpendicular fissure, extending downward as far as inter-parietal fissure or a little below that, forward not quite to the ascending parietal convolution. Also a very slight amount of adhesions at base of fissure of Sylvius. The first temporal convolution was quite atrophied, about one half as thick as normal, and had a yellowish color. This color also extended backwards to the interparietal fissure and a little above the fissure of Sylvius. Around lower end of central fissure two or three small spots where membranes were adherent and cortex was removed with the pia mater. Over vertex membrane œdematous, considerable serum in subarachnoid tissue. Arachnoid thickened and opaque. At the base arteries all normal.

On left hemisphere color normal. No adhesion or atrophy except about an inch from median fissure on ascending parietal fissure, a spot one quarter of an inch long, one third of an inch wide, oval in shape where the membrane pulled off a thin layer of cortex. About half way between fissure of Rolando and anterior extremity of brain, implicating the second frontal convolution, and to a very slight extent the first, there was a cyst about three quarters of an inch in diameter.

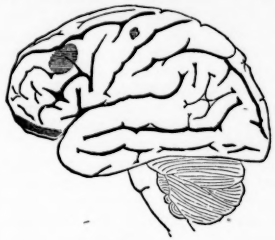


FIG. 4.

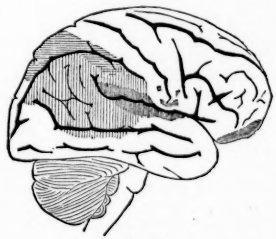


FIG. 5.

FIGS. 4 AND 5. Horizontal shading shows in Fig. 4 the location of the cyst; in Fig. 5 the points where the membranes were more or less adherent; perpendicular shading shows the parts which had a yellowish tint; the deepest shading where was the deepest tint.

On opening the ventricles the right optic thalamus bulged up more than the left, and had a yellowish hue.

The paracentral lobe on right side had somewhat of a granular appearance. Over the portion which was discolored yellow a very decidedly marked atrophy of cortical gray substance was noted, which was reduced in thickness about one fourth. The discoloration extended into fissure of Sylvius and implicated the island of Reil.

Lungs. Slightly œdematous and adherent in posterior and lower portions. Old cicatrices in apices. Bronchi contained considerable fluid of a serous character.

Heart. Not abnormal.

Spleen. Atrophied and anæmic.

Liver. Rather small, and on microscopical examination the acini rather granular and borders indistinct.

Kidneys. Rather small. Surface irregular and capsule adherent. Many Malpighian bodies were sclerosed; the convoluted tubules were granular.

Knee-joint. Much pus and fluid (synovial) and some crystals resembling fatty acicular crystals.

The cortex where least diseased showed simply an increase of spider cells in the outermost layer. As the amount of disease increased this layer of spider cells was somewhat thicker, but soon there was only to be noticed an aggregation of very small cells with relatively large nuclei. The blood-vessels running

through this layer were more prominent than in a normal cortex. This layer was not very firm, and was easily torn, so that in preparation it was sometimes impossible to avoid tearing it, and thus the outermost layer of the cortex was separated from the deeper parts. Where the change was most advanced the whole depth of the cortex was affected; many vessels were dilated much beyond the normal diameter. Where the change was less advanced the deeper layers of the cortex contained nerve cells which seemed to be healthy.

In these cases we have an example of unilateral spasm due to lesion of the cortex of the brain. In two the motor centres, which corresponded to the groups of muscles affected with convulsions, were most diseased; these were according to the rule. Not that these centres were more diseased than other parts; had they been those muscles would have been paralyzed, but they were evidently sufficiently affected to be the seat of an irritation. In the last case the centres for the affected muscles were apparently very slightly affected. Other parts of the brain were much more extensively diseased. Of course in judging of the seat of disease in cases of spasm due to cortical lesion we cannot limit the disease to exactly the motor centres. When it passes beyond those centres we may have no special symptoms developed to show us how far it has extended.

Conjugate deviation of the eyes due to spasm was present in all these cases. It followed the normal course as it is seen when due to lesion of the hemispheres, towards the side on which the limbs were convulsed. The rarity of conjugate deviation of the eyes from spasm makes this feature of the cases of interest.

WHAT IS MEANT BY NERVOUS PROSTRATION?[1]

BY ROBERTS BARTHOLOW, M. D., LL. D.,

Professor of Materia Medica and General Therapeutics, in the Jefferson Medical College of Philadelphia.

THE popular conception of the condition now known as "nervous prostration" is a state of debility, in which nervous derangements predominate. A man actively engaged in business or in public life presently finds himself unequal to his daily tasks; he suffers odd sensations in his head; his digestion is disordered; he is weak; wakefulness, mental depression, and a thousand and one new sensations of strange character and fearful portent are superadded. The unfortunate subject of these ills now recoils from his work, gives himself up to the consideration of his symptoms, and relaxes his hold on the interests and occupations of his life. All the world declares that he has "nervous prostration," and this explanation satisfies. Physicians say "neurasthenia" or "hypochondria," according to their habits of mind or to their training. Sometimes this condition is called the "American disease." Indeed, there is a general notion, widely prevalent, that neurasthenia is a peculiarly American malady. The late Dr. Beard was the apostle of this dispensation, and he not only was noisy and persistent in his advocacy of that view, but claimed, indeed, to have first clearly defined neurasthenia, and to have classified under this designation the numerous symptoms pertaining thereto. If we cannot admit Dr. Beard's claim in its entirety, if we experience repulsion at his tremendous but unconscious egotism, we are still compelled to acknowledge that his work in this connection is the most important that has appeared. He was peculiarly fitted to differentiate this malady by reason of the quickness and acuteness of his intellect, his power of analysis in its subtlest aspects, and his far-reaching, his omnivorous faculty for related facts.

The term *neurasthenia*, advocated by Beard, is by no means of recent origin. The corresponding French word, used in the same sense as we now employ it, has been a stock word of French neurological medicine for fifty years. Under the terms spinal irritation, hysteria, hypochondriasis, the nervous state, etc., symptoms of the same character as those now included in the word neurasthenia have been described. Besides the general state, similar derangements of functions of particular organs have been separately considered, as palpitation of the heart, headache, flatulence, impotence, etc. In the word neurasthenia — popularly, nervous prostration — the whole morbid complexus is included. The question I have to consider is whether this is a real, a substantive disorder. Are the notions now generally entertained about it founded on a true conception of the condition?

I need not enlarge on the importance of a correct understanding of a morbid state, which is supposed to be due to the conditions of modern, especially of American, life. Without stopping now to question the soundness of the prevailing doctrine, I will place before you the clinical history of two cases, representatives of the two types of neurasthenia. These may be designated respectively as the *congestive* and the *anæmic* varieties. The latter are greatly more numerous, but the former are not uncommon, as Beard admits.

CASE I. THE CONGESTIVE TYPE.

Mr. ——, aged forty-four, president of one of the largest railroad corporations of the West. He is now a robust man, five feet ten inches in height, 196 pounds in weight, and has a very dark complexion, his type of constitution being the so-called bilio-nervo-sanguineous. Beginning his career at an early age in a subordinate position, he has, by the force of a superior intellect and of a physique that no labor could subdue, risen to the highest office, and now controls vast interests. Ambitious, enterprising, resolute, he has carried these faculties into all his work, and has shrunk from no tasks, however severe — from no responsibility, however onerous. As he has risen in position, social engagements have also added to his burdens. His mode of life has changed to some extent. His habits have become more sedentary, although diversified by frequent railroad journeys; the pleasures of the table, including wine-drinking and late suppers, have been more and more indulged in; excessive smoking has been added to these indulgences; and thus, whilst his physical powers have been slowly impaired by bad hygiene, the demands on his mental powers have increased. Extensive interests, uncertain, often precarious, business arrangements, and the incessant watchfulness required when vast combinations may be wrecked through failure at any point, demand the highest use of every faculty; and thus to work is added worry.

Three years ago Mr. —— observed that he was not feeling well, and that he could not work as before. He became dull, especially after meals, had a constant headache, dizziness and throbbing of the temples; he

[1] Read before the Philadelphia County Medical Society, December 19, 1883.

applied his mind with difficulty, and all of the head symptoms were increased by the efforts made; he had a good, rather a keen appetite; a heavily coated tongue, flatulence, constipation, and some colic pains. The bladder was rather irritable, especially at night; sexual inclination had declined with lessened power, and various ill-defined but annoying sensations were felt about the penis, scrotum, and perinæum. During the first year the symptoms increased; the attacks of vertigo were sometimes very severe, so that he had to support himself for a moment to save him from falling. On several occasions he became very much dazed, even lost consciousness momentarily, and once wandered some distance from the proper route he was taking. Anomalous sensations of creeping and crawling, coldness and tingling, and often a burning heat, were felt in the scalp; sudden detonation in the centre of the head apparently; buzzing and singing in the ears, and very constant headache, were also experienced. In the extremities, the tongue, and the genitals, there were felt peculiar tingling, numbness, coldness, creeping, and similar sensations. During the whole time of the existence of his symptoms Mr. —— suffered from depression of spirits, a deep melancholy in fact, and he lived in constant apprehension of failure of mind.

Physicians whom he consulted in the West located the malady in the brain, diagnosticated cerebral hyperæmia, the prelude to softening.

When Mr. —— came to see me, sixteen months ago, the symptoms just detailed continued, and were rather increased than diminished. The objective examination furnished the following details: —

His face is full, the eyelids puffy, and the lower lid swollen into a bag; the conjunctivæ are injected, the sclerotic muddy, and the pupil sluggish in movement. On ophthalmoscopic examination, the fundus is seen to be injected, small vessels prominent, veins swollen. There is no optical defect, except that due to his age. The membrana tympani is also rather deeply red, and vessels too small to be seen under ordinary circumstances are now in view. Hearing is unaffected. Motility, sensibility — the tactile, pain, and temperature senses — are unaffected; and the reflexes remain normal, although probably a little sluggish. The electrical reactions are normal.

His tongue is heavily coated, the breath foul. His appetite is good, but a sense of fullness at the epigastrium persists for several hours after meals; acidity and eructations of rather foul gas now and then occur. The stools have the normal appearance — consistence, color, and odor. The urine is copious, acid, specific gravity rather high (1025 to 1030), and there are traces of sugar, as is usual under such circumstances.

The action of the heart is good, the pulse regular, the tension of the vessel rather high. The respiratory movements and murmurs are normal. The area of hepatic dullness is rather enlarged, and the splenic dullness seems, also, to be increased.

Subjectively the following symptoms are experienced: Various strange sensations in the scalp; a persistent headache; blurred vision at times; vertiginous feelings occurring irregularly and of varying severity; despondency, vague apprehensions; fear of places, especially of crowded assemblages; difficulty of deciding questions very trivial or otherwise, in place of former promptness; impaired memory for persons, names, and things.

Notwithstanding this extended list of symptoms Mr. —— did not have an ill look, but, on the contrary, on superficial examination, appeared to be robust. To him and to his immediate family the situation seemed in a high degree alarming. The surrender of his position and his business interests was regarded as imminent. To the apprehension awakened by his head symptoms was added the diagnosis of cerebral congestion, and hence the profound melancholy into which he was plunged.

Commentary. My conclusion was that the disturbance in the functions of the brain and nervous system were secondary to derangement of the assimilative processes — of the primary and secondary assimilation — and that to the functional disorder thus caused are added the effects of introspection and the realization by the centres of conscious impressions to an unusual extent of ordinary peripheral excitations. My reasons for coming to this conclusion will appear hereafter. The remedies consisted in a careful regulation of the diet, in baths, exercise, in a reduction of the hours devoted to work, but not the cessation of work; in the use of a laxative quantity of sodium phosphate daily, and in the administration of the aqueous extract of ergot, with the chloride of gold and sodium, and a minute quantity of bichloride of mercury. If time and space would allow the details of the hygienic management — so important in these cases — could very profitably, I think, occupy our attention, but I must pass on to the next case.

CASE II. THE ANÆMIC TYPE.

Mr. ——, aged fifty-seven, lawyer by profession. His type of somatic constitution is the nervo-sanguine; weight, 145 pounds; height, five feet nine inches. He has immense mental energy, extraordinary quickness of perception, a capital logical and critical faculty, and fine oratorical power. These native abilities, conjoined with extensive cultivation, soon placed him amongst the foremost men at the bar of the city where he practiced, and have long maintained him in that position. For many years he has been a dyspeptic, and suffered much from eructations of gas, from acidity and flatulence. At times — months, even years intervening — he has experienced very severe seizures, accompanied by extreme mental depression, alternating with as extreme mental exaltation. During the past five years he has had two attacks of gout, neither severe nor protracted. During the whole course of his professional life he has sustained no reverses, encountered no other anxieties than those of a successful lawyer, and has been rather singularly free, indeed, from the worries of life. Receiving, last summer, the nomination as a candidate to an important office, this cultivated gentleman, scholar, and lawyer, this man of nice tastes and high tone, entered on a canvass marked by vituperation and slander to an unusual extent. About the same time some business interests became entangled and caused no little worry. During the campaign he visited some malarious districts, and spoke several times at night in the open air. A speaker of great readiness and power, he never suffered from any considerable fatigue after public speaking, and hence he was now surprised to find himself exceedingly tired after even a brief effort. He began to have drenching night sweats, lost his appetite, grew weak, and was compelled to return home. It was then ascertained that he had malarial fever, and he was treated accordingly. But at this time and subsequently symptoms not necessarily of malarial

origin appeared. He became frightfully dyspeptic, had enormous eructations of gas, and very considerable flatulence; his arms and legs had a numb feeling, attended with "pins and needles;" he walked with some difficulty, partly because of weakness; he was somnolent, and slept a good deal, and his spirits were extremely depressed, especially on awaking in the morning. During these periods of depression he was so overwhelmed with despondency that he was apprehensive he would lose his self-control entirely.

When he placed himself under my charge he had still a slight daily paroxysm of fever, the exacerbation occurring in the morning, but this disappeared in a few days under the action of some efficient doses of quinine. He was very weak, pallid, and emaciated, and slept a good deal of the time. He had no headache; his vision was rather dull, and ideas and speech slow. Every morning on awaking he was profoundly melancholic, and all the annoyances which the campaign had developed were gone over in his mind. He could talk of nothing else, think of nothing else than his ill feelings and the disagreeable political and personal slanders of which he had been made the victim. He complained much of the numbness of his hands, of weakness in the limbs, and he talked incessantly of his depressed feelings. The bladder became irritable, and he was compelled to rise every two or three hours during the night, the urine being acid, and depositing heavily of uric acid. Presently the somnolence was displaced by insomnia, and he slept less and less, and rose in the morning haggard, exhausted, and horribly nervous and depressed. Ordinary hypnotics proved unequal to the effort to force sleep, and increasing doses of chloral became necessary. His mental activity, heretofore so remarkable, declined, and the effort to force his mind to the performance of any work, such as letter-writing, caused a sensation of fatigue. He also became undecided, even in small matters, ceased to have any inclination to go out and mingle with the public, and grew more and more averse to political movements. He reached a point finally when to meet strangers caused him great distress, excited the circulation, and induced a cold sweat.

As it became indispensable that he should resume the canvass he made a strong effort, and notwithstanding the fatigue, mental and moral depression, and exposure of public speaking, hand-shaking, and other matters of political expediency, he actually improved somewhat. The insomnia, irritable bladder, and hypochondriasis, however, continued, but to a less degree. In a few weeks, by means chiefly hygienical, I succeeded in stopping the chloral; natural sleep was resumed, although it remained somewhat fitful. Suitable dietetic regulations, baths, exercise, and medicines, *pro re nata*, removed, or at least greatly modified, the principal symptoms. Two weeks at Atlantic City accomplished no little good, and when he returned to Philadelphia last week he appeared to be nearly his old self.

Commentary. In this case we have exhibited that complexus of symptoms entitled neurasthenia or nervous prostration in its anæmic form, produced by several factors, moral and somatic. The moral were very influential, but unless the conditions producing bodily depression had occurred, the former causes could hardly have effected such results. Long-standing dyspepsia had prepared the way, malarial intoxication and fatigue contributed an important series of changes, and upon this weakened bodily state were precipitated crushing moral influences.

These cases whose histories I have just read are typical; each is the representative of a group. The causes are complex. The effects are not limited to one organ or set of organs, but involve the system in general. To name this malady from the disturbance in one system seems to me an error unless the definition is sufficiently elastic to include all the functions affected. Neurasthenia names one only of the parts involved. To entitle this the "American disease" is a strange misnomer. It might with more propriety be called the "French disease," for a condition known as "the nervous state," as "nervism," as "neurasthenia," and similar terms, has been recognized and frequently described by French writers from an early period in this century. In France have existed the causes in the most influential form. The frequent political convulsions, the exacting social life of the great cities, and the harassing struggle for existence inseparable from the state of the great mass of the population induce — if any mere external conditions can — that which is called nervous exhaustion. There are two factors supposed to be especially influential in this country, work and our exciting political and social life. I believe that the effect of these is greatly overrated.

The brain, of all the organs of the body, illustrates in the most perfect manner that which has been happily styled "the principle of least action." That is, to execute given tasks it expends the least possible force, or, to express the same idea in another form, its work is done with ease with the minimum of effort. Given a certain amount of repose — sleep — and supplied with proper nutriment — healthy blood — the brain will do its allotted work continuously during its working — the waking — hours. So far from being injured by severe labor carried on under normal conditions, the brain is improved by it. Mental activity, like muscular exercise, keeps the brain in a healthy state. When, therefore, a man says he is suffering from the effects of mental overwork I want to know what his vices are. Worry may be one of these. Worry is exhausting. The worries of life do infinitely more harm than the work of life, how onerous soever it may be. The cases I have just read illustrate this.

I deny that life is more exciting on this side of the Atlantic. The one prize of life is money, and to get possession of it is the supreme purpose, to the attainment of which every energy is put forth. Is it less so elsewhere? Who are the peoples that despise money, and make no effort to obtain it? Here life is less exciting because our political condition is stable, and but comparatively little exertion is required to secure a comfortable subsistence. I am speaking now of the mass of the population, and not of the few consumed by ambition for political and social distinction, or led by a pitiless greed. It is the very ease and luxury of our American life that cause mischief. It is the indulgence in eating and drinking, the abuse of alcohol and tobacco, sexual excesses, sedentary habits, and too luxurious lives generally that induce the state of the system called nervous exhaustion. If I had time each of these should be considered in relation to this subject. In the first case I narrated the pleasures of the table and disordered assimilative functions caused the trouble. In the second case, dyspepsia, malarial toxæmia, and unusual fatigue were the pathogenic factors. In both the effects of these causes were increased by moral in-

fluences; in one, the anxieties involved in vast business enterprises; in the other, the excitement of a hot political contest. These moral causes would have had no injurious effect had not the somatic conditions been unfavorable.

I come now to the most difficult part of my subject. I have to answer this important question: Why are the somatic derangements caused by the conditions referred to in some cases accompanied by the mental and nervous symptoms which belong to neurasthenia? Why do some subjects with indigestion and assimilative disorders, or with the results of dyspepsia and malaria, suffer from the derangements of the mental and nervous functions and not others? I might here take refuge behind an accepted generalization, and say that the presence or absence of the neurotic type of constitution explained the difference in the result. There is aptness in this explanation, but it is not entirely adequate. There is a mental condition of great importance, and unless we comprehend this we fail to realize all the possibilities of the nervous side of these cases. I, however, barely hint at the main points under these circumstances. Besides, I wish to avoid a too metaphysical discussion of the subject.

In the conduct of life every man who has a position to make or to maintain exerts a certain moral force to hold himself up to his work. Some men are so happily constituted that they are quite unconscious of the effort and stand in the front, serenely confident. Others are all the time laboring; they feel it and know it; and like the soldiers of Thomas's corps at the battle of Chickamauga, sorely pressed, now and then look back to see whether their grim and resolute commander is still behind them with his invincible courage. Men conscious of the effort making to keep up need but little excuse to surrender themselves to their sensations. At the present time nervous prostration is much feared; its symptomatology is a common subject of discussion; and hence, if a man who is familiar with its character is arrested in his career by some of the ailments supposed to belong to it, his imagination readily supplies the rest. When a man begins the study of his bodily sensations, having a certain model in his mind, he has little difficulty in filling out the details. All the world knows that when the attention is strongly fixed on an organ of the body functional disturbances of it ensue, and finally structural changes may be induced. No part of the body is without sensation, even in health. To perceive these sensations the attention needs to be withdrawn from external things and concentrated on the part. Thus it is when the subject of neurasthenia pursues his introspection; he becomes conscious of numerous sensations, which, because now felt for the first time, are new. Under these circumstances, also, the seat of conscious impressions becomes more acutely perceptive. Suggestion adds its quota of symptoms.

To the indefinite and multiplying nervous symptoms developing thus subjectively must be added the reflex. Headache, vertigo, tinnitus aurium, amaurosis, diplopia, hallucinations and illusions, defects of speech, paralysis, are reflex symptoms on the part of the brain; palpitation, intermittent pulse, angina pectoris, laryngismus stridulus, asthma, are amongst the reflexes of the respiratory organs and heart; neuralgia, anæsthesia, and other disorders of the sensory nerves, and local paralyses, affections of the motor nerves, included amongst the nerve reflexes, may all be dependent on reflex excitations proceeding from the stomach. Indeed, there is no symptom in Beard's catalogue of those belonging to neurasthenia that may not be due to merely reflex influences having their initial seat in the digestive apparatus. It follows that the term neurasthenia, or its common equivalent, nervous prostration, is either inadequate or it expresses too much, — inadequate if the complex of symptoms includes the functional disturbances of all the organs affected, expresses too much if the malady is a merely nervous one.

In reply to the question: "What is meant by nervous prostration?" I respond, "A disease usually functional, situated in one or more organs, during the course of which reflex disturbances of the brain occur, and numerous subjective sensations in all parts of the body are realized by the consciousness."

I deny that neurasthenia is a primary nervous affection, or that it is a substantive disease. I hold that it is symptomatic and secondary.

This conception fixed in the mind, the treatment of neurasthenia is successful or unsuccessful according to the measure of our skill in localizing the initial disturbance, and in addressing our remedies to that as well as to the general state.

THROMBOSIS AND THE CONDITIONS WHICH FAVOR ITS DEVELOPMENT.[1]

BY C. H. BROCKWAY, M. D., LYNN, MASS.

SAYS a recent writer, "There is no more intricate problem awaiting solution at the hands of the clinical and pathological investigator than that of the clotting of the blood in the vessels during life." And I think I do not overstate the case by saying that no more appalling accident is brought to our notice from time to time than the sudden supervention of thrombosis or embolism, alarming and distressing the patient, — if, indeed, he escape immediate dissolution, — terrifying his friends, and causing the gravest anxiety to the physician. This event, moreover, is seldom looked for, but comes with startling suddenness in the course of diseases and morbid conditions which up to that moment had apparently been progressing favorably.

Let us look for a moment at the conditions which favor thrombosis. (1.) A stagnant or arrested circulation, as in some cases of pulmonary thrombosis, in which the clots in the arteries are probably the result of obstruction in the circulation through the lung capillaries. (2.) A mechanical obstruction around which coagula form. (3.) And most important of all (as Playfair says in writing on this subject) cases in which the coagulation is the result of some morbid state of the blood itself.

There is, probably, no condition in which the predisposing causes of thrombosis exist in so marked a degree as in the puerperal state, and many of them are clearly exhibited even during the period of gestation. In pregnancy the blood is more watery, is deficient in red globules, and contains a larger proportion of fibrine, which must be looked upon as a waste product. So long as the excrementitious elements generated in the mother's system and that of the fœtus are freely eliminated all is well, and this natural expelling of waste products goes on without disturbance while the lungs,

[1] Read before the Essex South District Medical Society at Salem, December 18, 1883.

heart, and glandular system generally are in good working order; but if for any reason the elimination of effete materials is impeded there is at once a gathering of noxious matters in the blood which promptly poisons that life-giving fluid. And yet notwithstanding the excess of fibrine and proneness of the blood to clot during pregnancy, thrombosis is rare in this condition, the eliminative processes being ordinarily active enough to carry away the waste products; both nervous and vascular tension are high, and the glandular system works with rapidity. The marked exception as regards the kidneys, however, demands a passing remark. There are cases of sufficient frequency to come under the occasional notice of each one of us in which the kidneys fail in their proper office and permit the excrementitious elements of the urine to be retained in the blood. In such an event that fluid is loaded with a morbid and poisonous material composed not only of urea but probably of other effete materials which would be eliminated in a freer state of the abdominal circulation. In death from this form of poisoning thrombosis does not occur (so far as I can learn). If the theory of Richardson be tenable this fact may be accounted for by the presence of large quantities of carbonate of ammonia in the blood of those suffering from uræmic intoxication, thus keeping the fibrine in a state of solution.

The great majority of cases of thrombosis in lying-in women occur a variable number of days after delivery. What are the new conditions left by labor which predispose the patient more than ever to the accident of blood-clotting in the vessels. The frequency of the heart's action has been much lowered and vascular tension diminished. The drain of blood following the birth has been considerable, perhaps excessive; this causes an increased activity of absorption of good and bad material alike. During pregnancy the waste products are gotten rid of without much difficulty, the excretory organs working hard under the stimulus of a heightened vascular and nervous tension. After labor, with that tension lowered, the eliminative system is called upon to do a much greater amount of work. In fact it is in danger of being overstrained. As soon as uterine involution is well under way a great quantity of noxious material is poured into the blood. In most cases, to be sure, this is quietly expelled by the natural processes, and no untoward event occurs, but no one can for a moment doubt that the woman is in a precarious condition. This irruption of effete matter is apt to furnish that very ferment (for want of a better term) which recent writers declare to be necessary to precipitate in various localities the fibrine which was already in excess in the blood. The thrombosis thus produced is often a *conservative* measure, inasmuch as coagulation is apt to first take place in the uterine veins and pelvic vessels generally, thus protecting the blood as a whole from immediate infection. These venous plugs or thrombi after a time undergo a process of disintegration with a view to their ultimate removal. During this period one of the clots may become loosened from the wall of the vessel or a portion may break off from the main body of the coagulum and, entering the systemic veins, be carried along by the venous current until it reaches a vessel too small to allow of its onward progress, where it remains, plugging that vessel and, of course, producing the same symptoms as if a thrombus had originally formed at that point. This migratory plug is an embolus, showing that embolism is but an accident of thrombosis, and cannot occur but as a sequel to that event. When a clot is loosened from one of the pelvic veins and passes upward it usually ends by plugging the pulmonary artery or one of its branches, and thus causing those terrible results of pulmonary obstruction which so often end the life of the patient. It was formerly asserted by the most eminent German pathologists that this obstruction was *always* due to an embolus, and that primary thrombosis in the pulmonary arteries was an impossibility. This view was combated by Playfair, who produced many clinical facts to support his belief that coagulation of fibrine took place in the right side of the heart and pulmonary arteries. He reports twenty-five cases of sudden death after delivery in which accurate post-mortem examination had been made, and the results are important and instructive. In seven of them there was distinct evidence of embolism, and not one of those patients died before the nineteenth day. In fifteen of them no evidence of embolism was found to account for the plugging of the pulmonary vessels; they all died within two weeks with one exception, and some in two or three days. The fact of death occurring so soon is in itself against the theory of embolism, as time is required to induce those degenerative changes which lead to the separation of a clot in the peripheral vessels.

Thus far I have briefly sketched the chief conditions which favor thrombosis, and have drawn illustrations from puerperal cases because the literature of the subject is comparatively rich as applied to lying-in women, and it is through these reported cases, and the commentaries that have been made upon them, that the majority of the profession has been instructed in the effects of blood-clotting in the vessels during life. But this affection, as you well know, is not peculiar to pregnancy and the puerperal state.

It may and does occur as a complication of common diseases, and this paper is especially written to draw your attention to this fact, and to illustrate it by two cases of scarlatina occurring in my own practice, in which there was strong evidence of thrombosis of the pulmonary artery. The first patient was a boy of ten years, enjoying previous good health. He was seized with scarlatina. The eruption came out freely, the fever was high (105° F. the second evening), but not unusually so, and there was nothing about the case to cause any anxiety until the sixth day. At this time the boy showed symptoms of marked exhaustion, the eruption had considerably faded, and the cervical glands, which had been moderately swollen for two or three days, suddenly grew large and painful, the pharynx was congested, and there was some pain on swallowing, but the symptoms referable to the throat were not significant. He breathed naturally, and there was nothing to draw one's attention to the chest. His appetite had failed, and he looked decidedly ill without any assignable cause other than the general blood-poisoning common to the disease. This on the sixth day. On the afternoon of the seventh I was hastily summoned, and found him suffering with horrible dyspnœa and gasping for breath. The attack had come on suddenly, so the father said. The boy's face was rather pale. When I first arrived, only a few minutes after the attack came on, the heart was beating tumultuously; the respiratory sounds were natural. Strong mustard poultices were applied to the front of the chest, and brandy with the aromatic spirits of ammonia was

freely given. In half an hour the heart beat grew feebler and fluttered, the respirations became very short, and he was soon dead.

No post-mortem examination was allowed, but I think the symptoms were too significant to admit of any doubt regarding the occurrence of pulmonary obstruction, and that from a coagulum in the right heart, and extending into the pulmonary artery.

The next case was also a boy, a trifle younger, perhaps seven years of age. In him the eruption was well developed, and the fever active for a few days, when he showed marked signs of exhaustion. With the other case fresh in mind (both occurring the same year), although there was nothing in this child's condition to warrant an expectation of heart clot, I watched him carefully, and took pains to have him well nourished and the secretions kept in an active condition, at least the skin and bowels, the latter acting rather freely of themselves. The urinary secretion was fairly good; there was a trace of albumen in the urine, if I remember aright, but no œdema or uræmic symptoms. I gave him the carbonate of ammonia in two grain doses every hour. This was not well retained, as he vomited frequently both medicine and food. This irritability of stomach I had noticed in the boy before when treating him for various disorders. The parents considered that he always had "a weak stomach," as they termed it, and this symptom did not alarm me. He was bright, and complained of no head symptoms. This was his condition after he had been ill a week and a half, when his father came in haste for me one evening. I found the boy greatly distressed for breath, a symptom which had come upon him suddenly. His dyspnœa was nearly as great as in the fatal case above narrated. His heart beat rapidly and was feeble. His respirations were of a gasping character. He was given brandy by the mouth and rectum, and mustard was applied to the chest. This relieved the violence of his dyspnœa somewhat, but yet he was evidently in a critical condition. The attempt at stimulation by the mouth was soon abandoned as he instantly rejected it. The vomiting had no apparent effect upon his breathing. He continued in this way throughout the night, being worse at times, but relieved by the stimulant, and especially by having him breathe an atmosphere surcharged with the vapor of water, as is customary in cases of croup. The next day he was more comfortable, though still much distressed. He was kept quiet, sinapisms applied to the chest, and brandy given at intervals when his symptoms demanded it. He gradually recovered. It may be doubted whether this was a case of pulmonary obstruction, but the symptoms were well marked, and to me unaccountable on any other hypothesis.

Playfair records a number of cases of recovery with symptoms the same as above recorded occurring in women after labor. As he says, "if the obstruction be only partial and sufficient blood pass to keep the patient alive," recovery is surely not impossible.

Cases of sudden death from thrombosis occur now and then in diphtheria. Flint says that he lost one patient in acute rheumatism from the sudden occurrence of a coagulum in the right ventricle, passing into and obstructing the pulmonary artery. Tanner believes that the sudden death of many patients with croup is due oftener to thrombi than to asphyxia.

One word as to treatment. In the way of preventive medicine I know of nothing unless we give as a routine practice the carbonate of ammonia in large doses in all cases whenever we have reason to think the occurrence of heart clot possible. But this hardly seems practicable, and its efficacy is doubtful. The eliminative organs should be kept in active condition by every means in our power, and I have thought that the sulphite of soda might be freely used with benefit in all septic conditions of the system.

Hospital Practice and Clinical Memoranda.

TWO CASES OF UTERINE POLYPUS.[1]

BY FRANCIS MINOT, M. D.

THE first patient was a married woman, forty-nine years old, who had never been pregnant. General health good till about three years ago, when the menstruation became frequent and profuse. For the past three months the hæmorrhage had been continuous. She entered the Massachusetts General Hospital in a very anæmic and debilitated condition. The uterus could be felt above the pubes, and was not apparently enlarged. On vaginal examination the cervix was found to be very large, spherical in shape, with an opening in the presenting part into which the finger could penetrate with some difficulty. A smooth, hard mass was felt within it, not adherent to the walls of the cervix. On account of want of space the pedicle of the tumor could not be felt. A loop of twisted wires was passed over the tumor and tightened by an écraseur until the pedicle was cut through. The tumor was then removed without much difficulty, the os being incised in two directions to permit its exit. The vagina and cervix were carefully sponged out with a solution of carbolic acid, and the vulva was covered with salicylated cotton. Scarcely a drop of blood was lost. The perinæum was frequently bathed with carbolic acid solution. The operation was done March 16th. The next day there were no symptoms, but on the 18th the temperature rose to 100° F., and carbolized vaginal douches were ordered. On the 19th there was a chill; on the 20th, vomiting. The temperature continued to rise, the abdomen became tympanitic and tender, and she died March 22d at midnight. The tumor was an ordinary fibroid of the size and shape of a lemon. In addition to the carbolic douches eight grains of quinine were given every four hours, besides morphia, etc. It was found, after the patient's death, that there was a case of erysipelas in an adjoining room, and, notwithstanding the precautions taken, there can be no doubt that the fatal result was owing to septicæmia originating by contagion.

The second case was that of a married woman, who entered the hospital at about the same time as the above, and whose history was almost identical with hers. The tumor was wholly extruded from the uterus, and occupied the vagina. It was somewhat smaller than the first, and was nearly spherical. It was drawn down with hooks, and separated from the stalk before the latter could be severed with scissors. The patient was carefully isolated, and every precaution was taken to prevent infection. There was no untoward symptom, and she left the hospital in a few days, well.

[1] Read before the Obstetrical Society of Boston, March 10, 1882.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

At a meeting of the Boston Society for Medical Observation, held November 5th, Dr. C. M. Green reported the following

CASE OF MAMMARY CANCER. OPERATION. SUBSEQUENT CATARRHAL PNEUMONIA, WITH CANCER OF THE LUNGS. AUTOPSY.

In January, 1882, I was consulted by Mrs. T. on account of a small tumor of the left breast. The patient, a widow, forty-five years of age, the mother of one child, had been for several years in poor general health. Although in fairly comfortable circumstances she had worked very hard; her appetite was fickle; her digestion poor; and she rarely partook of animal food. She had passed the climacteric a year and a half before without incident. One year before I saw her she noticed a slight, non-offensive discharge from the left nipple, which was somewhat excoriated and sore. At times the discharge would cease and the soreness disappear. Four months before she consulted me the nipple was noticeably retracted, and three months later the discharge began to be offensive.

On examination the gland was found to be hard, the size of a small orange, and the nipple retracted; the integument was firmly adherent to the gland, and was excoriated about the nipple; there was a sero-purulent discharge sufficient to stain the linen. No enlargement of the axillary glands could be detected. I considered the growth to be cancerous, and advised its immediate removal.

A few days later I excised the entire gland by the usual operation, removing all the subcutaneous tissue, and as much of the integument as I thought necessary. There was very little hæmorrhage; four or five bleeding points only were tied with carbolized catgut. A drainage tube was inserted; the skin united with catgut sutures covered with antiseptic gauze, and supported with adhesive straps and a binder. There was but slight discharge from the tube, and on the fifth day union by first intention had apparently taken place except over a small extent. But two days later most of the sutures were found to have dissolved, and the wound gaped. The drainage tube was, therefore, removed, and the wound dressed with carbolized oil and left to granulate. Two weeks after the operation the patient was eating more than she had for years and was in every way comfortable. The wound was filled with healthy granulations.

Dr. W. F. Whitney very kindly examined the tumor and pronounced it to be scirrhous cancer. He found, too, to my regret, that cancerous digitations had been cut across by my incision on the sternal side; and I, therefore, watched the case with expectation of a recurrence of the growth in the cicatrix. I determined, too, that thereafter I would follow the advice of Professor Gross and remove the integument more freely, even at the expense of a large suppurating wound.

The patient continued in good general health until the following December, when she took a cold from sleeping in a room, the ceiling and walls of which had been wetted through a leaky roof. This cold proved to be the beginning of the end. Although improving in some respects, in the following March the patient had lost flesh and strength and suffered much from cough and dyspnœa. There were fugitive sibilant râles over the entire left lung; sibilant and abundant fine moist râles over the right scapula and at the base of the right lung, with dullness on percussion. The expectoration was scanty and of a white, frothy character. There was some pain under the right scapula. It was clearly, to my mind, a case of catarrhal pneumonia. In April fine, moist râles were heard also over the base of the left lung, and the respiratory murmur was harsh over both apices. The pulse was rapid and weak; the respirations increased in frequency and shallow; the cough and dyspnœa considerable. There was pain and a sense of suffocation referred to the epigastrium.

The treatment adopted alleviated the symptoms, but the disease pursued the usual course. With the knowledge of the preëxisting cancer of the breast I was, of course, alert to discover symptoms of a secondary growth elsewhere. There was as yet no return of the growth in the cicatrix. Although later on there was great pain through the base of the left lung, requiring morphia, it was apparently ascribable to pleurisy, and the physical signs were at no time indicative of pulmonary cancer. Nor was I able to discover any physical evidence of cancer of the stomach, although a sense of pain and constriction in the epigastrium and occasional vomiting pointed to the possibility thereof. Early in June the temperature was for the first time observed to be elevated. From this time decline was progressive, and death occurred one month later. The day before death the patient vomited blood once or twice. At the time the explanation was not clear to me, but the post-mortem examination revealed the source of the hæmorrhage.

The autopsy was made by Dr. Gannett twenty-six hours after death. His report is as follows: —

Body medium-sized, fairly developed, much emaciated. Rigor mortis present. The left breast absent, its seat occupied by a healed cicatrix, by estimate fifteen centimetres long. Diaphragm right and left at the upper border of the third rib. Pericardium contained about forty centimetres of clear fluid. Pericardial surfaces not remarkable. Heart diminished in size; left ventricle contracted and empty; right ventricle and auricle moderately distended with dark-red coagula. Aortic valves sufficient; mitral admitted tips of three, tricuspid tips of three, fingers. Valves and cavities not remarkable. Muscular substance of a dark-brown color. Coronary vessels not unusual.

The left pleural surfaces, adherent laterally and over apex by tolerably firm adhesions; on the right side pleural surfaces adherent throughout by firm adhesions. The left pleural cavity contained no fluid. Both lungs only partially retracted; showed numerous irregular depressions, with here and there portions of lung substance projecting considerably above the surrounding parts; such portions were pale, and showed beneath the pleura numerous alveoli as large as pins' heads. On pressure over the left lung numerous small nodules could be felt within. On section of the left lung, at the apex, were several cavities, varying in size from a pea to a filbert, with nearly smooth walls and thick curdy contents. In the lower lobe were numerous gray, firmer nodules about the size of a large pea; from many of these small drops of a puriform fluid could be squeezed. There were also a few grayish,

slaty nodules, denser than the last, and with irregular borders. The right lung had similar appearances, except that there were no cavities in the apex, and the nodules were far more numerous in the lower lobe, making it dense and firm. In several places in this lung the walls of the larger bronchi were much thickened; many of the lumina contained cheesy or puriform material.

Examination of various parts of the lungs after hardening gave the following appearances: The peribronchial connective tissue very much thickened in many places, and in it were numerous long and rather narrow spaces or alveoli filled with large epithelial cells atypically arranged. The lung substance in the immediate neighborhood had a similar appearance. Many of the smaller nodules described above showed a mesh-work made up of the usual lung structure, but the spaces were filled with nests of large, well-defined epithelial cells and nothing else. Other portions of the lung showed the appearances characteristic of a catarrhal pneumonia with here and there areas of interstitial pneumonia.

Spleen somewhat diminished in size, pale, of the usual density; on section, follicles and trabeculæ distinct; pulp considerably diminished in amount. Kidneys somewhat reduced in size, pale, of the usual density; capsule detached with some difficulty, leaving here and there a roughened, granular surface; on section cortex uniformly diminished, surface pale; nothing unusual detected. Ovaries considerably diminished in size; external surfaces irregular, showing numerous cicatricial depressions; density increased; on section show a dense, grayish surface. In the left parovarium was a thin-walled cyst, with clear fluid contents, about the size of a filbert. Beneath the peritonæum, covering the uterus and in the uterine wall, were two dense, grayish tumors about the size of a pea. The stomach, on the lesser curvature, showed two losses of substance of the mucous membrane about five millimetres in diameter extending rather more than half way through the mucosa; one had a black (hæmorrhagic) base. There were also a few superficial hæmorrhagic erosions of mucous membrane. The intestines had nothing remarkable. Liver reduced about one fourth in size, usual density, brown color; on section acini small, centres distinct as brown points. Under the peritonæum at two points were grayish nodules the size of a split, dried pea. Bile ducts pervious. Nothing abnormal observed about the pancreas or aorta. At the sternal end of the cicatrix mentioned above were two nodules, the size of filberts, of grayish color; on section showed a grayish surface with numerous opaque specks.

Post-Mortem Diagnosis. Brown atrophy of heart. Chronic adhesive pleurisy. Chronic catarrhal pneumonia with cavity formation. Chronic interstitial pneumonia. Cancer of the lung. Chronic peribronchitis. Simple atrophy of spleen and kidneys. Parovarian cyst. Fibro-myomata of uterus. Brown atrophy of liver. Cancer of liver (probably). Cancerous nodules over sternum.

It will be seen, therefore, that there was abundant microscopic evidence of cancerous new growth in the lungs. Whether this process had its origin prior to the development of catarrhal pneumonia I am unable to say; but there were no symptoms referable to the lungs until after the exposure to cold and dampness, when the catarrhal process developed in natural sequence.

The cancerous nodules at the sternal end of the cicatrix were plainly attributable to the incomplete removal of the original growth; and this experience teaches, as was remarked above, that it is wiser to remove the integument freely and leave, if necessary, an open wound to close by granulation.

In similar cases I would not again close the wound with catgut sutures, especially where the tension is great; silk or silver wire would be, in my opinion, preferable.

DR. WEBBER then read a paper on

CASES OF LESION OF THE BRAIN CORTEX ATTENDED WITH UNILATERAL SYMPTOMS.

In reply to Dr. Blake the reader said that these unilateral spasms affect one or a few groups of muscles, and are caused by lesion of the cortex due to hæmorrhage, tumor, or meningitis. In the second case there was no previous history, and the unilateral spasms alone would not show the nature of the lesion.

DR. DRAPER asked if the diagnosis of meningeal hæmorrhage made in the first and second cases was not very rare without external violence.

The READER thought it was not so rare as hæmorrhage into the cerebral substance. In this case it seems to have come first in the substance of the brain and spread thence to the meninges. One reason for the diagnosis was that the patient had had long-continued brain symptoms which were suddenly followed by unilateral spasms. The previous history precluded chronic disease of the brain. In some rare cases one might have an abscess or tumor in the brain with no symptoms previous to such an outbreak. As to the examination of the fundus of the eye the reader said that it was not possible to make it in all these cases on account of the spasms. If there was a chronic meningitis on the surface of the hemisphere often no change was found in the eye, but in trouble at the base of the brain or with tumor such an examination would often show definite change in the fundus, and might be of use in making a differential diagnosis. In the first and second cases reported there was a strong retraction of the head, but no opisthotonos; also there was considerable reflex resistance to rectifying that position, but the lesion was not the same in the two cases. In reply to Dr. Williams the reader said that conjugate deviation of the eyes is of limited value as a means of localizing lesions of the brain. This deviation is due to two causes: either paralysis of the external rectus and the opposite internal rectus or spasm of these two muscles. When the deviation is due to paralysis, if the eyes are turned away from the paralyzed limbs, towards the side on which the cerebral lesion has occurred, the lesion must be above the pons; if the deviation is due to spasm and the eyes are turned towards the convulsed limbs, away from the cerebral lesion, the lesion must be above the pons. These forms of conjugate deviation are only of value as localizing symptoms to this limited degree; no opinion can be formed as to the exact seat of the lesion in the hemispheres. If, however, in paralysis the eyes are directed towards the paralyzed side, away from the cerebral lesion, or in convulsions away from the convulsed limbs towards the cerebral lesion, the conjugate deviation indicates that the lesion is in the pons, in the vicinity of or implicating the nucleus of the sixth nerve. In this respect the deviation is of value as locating the seat of disease within very narrow limits.

[1] See page 49 of this number of the JOURNAL.

ANEURISM OF ASCENDING AORTA.

DR. J. G. BLAKE then reported the following case: —

M., aged sixty, carpenter, married; his father died of typhoid, mother of paralysis, and two sisters of phthisis; has one brother living; was intemperate when a young man, but now takes only an occasional drink; no history of syphilis. Three years ago had a pain accompanied by a severe cold in the right side near the nipple and in the right arm. This kept him in bed only a week. First saw the reader about twenty-one months ago, when he complained of cough and pain in the chest and arm, the cough was worse at night and when lying on the affected side, which brought on a choking sensation in the throat. He referred the pain to the junction of the third rib with its cartilage, and on placing the ear over the part a strong pulsation was felt which extended over a surface about as large as a silver dollar. With the stethoscope the sounds were those of a normal heart. No bruit was detected, but there was an absence of respiratory murmur about the pulsating point, and loud bronchial respiration over the upper part of the chest, back and front, with sibilant râles over the lower part. The position of the heart and its sounds were normal, but the heart seemed to strike the chest with abnormal force. Pulse 80. His voice was husky, but he said this was always so. There was no difference in the pulsation of the radial arteries.

About four months ago I examined him again. There was a slight bulging of the chest at the point where the pain was greatest, and the pulsation covered a larger area, but was not so strong as before. There was no bruit over the tumor. Heart sounds normal. The cough was very troublesome. He can lie only on the affected side, for when he turns on the other it brings on the choking feeling. There are signs of effusion in the right pleural cavity, and the face, eyelids, and right arm are much swollen. Urine normal.

Two months before his death the chest was aspirated, in consultation with Dr. Bowditch, and two quarts of clear serum were withdrawn, which gave great relief to the breathing. The swelling of the face and arm diminished rapidly, and almost disappeared. In about three weeks after the tapping the arm again became œdematous, also the face and neck, and the eyelids were so much swelled as to almost close the eyes. Three weeks before his death he expectorated some bloody mucus, and a week later coughed up some three ounces of frothy blood, and four days afterward some blood clots of a very dark color. For a week before death he took no nourishment, partly on account of the difficulty he had in swallowing.

The autopsy, by Dr. E. G. Cutler, showed the following condition: —

The body was extremely pale. Face and upper parts of body quite œdematous. On opening chest there was slight absorption of the cartilages and distal ends of the second, third, and fourth ribs, and of the intercostal muscles between them on the right side. The right pleura contained about two quarts of dark, loose, coagulated blood. The heart, not enlarged, was displaced somewhat towards the left. There was an aneurism of the anterior and right lateral portion of the ascending aorta, beginning half an inch above the aortic valves and ending an inch short of the innominate artery. In size it was about as large as the two fists. Rupture had occurred in the most dependent portion into the right pleural sac. A large laminated clot was found inside the aneurism about two inches in thickness. The wall of the aneurism gradually disappeared and merged into the surrounding tissues, principally the pleura and pericardium. The right lung was collapsed, and occupied a small area; its surface was covered with a few shreds of recent fibrine; the pleura was injected and thickened. The source of the hæmoptysis was not discovered. The other organs were not diseased.

DR. BOWDITCH stated that when he examined the patient on May 8th he found the heart sounds normal; the respiration obscure over a large space in front, to the right of the sternum, and extending from the first to the fifth rib; on full inspiration a few sonorous râles were heard, but no bronchial respiration. In the centre of this space, over the third rib, flat percussion was found, but no bellows murmur there or over the heart. On the back the respiratory murmur was lessened over the entire right side; there was no area of dullness, but a less resonant sound on percussion. On taking a full breath a few sonorous râles were heard at the end of the inspiration. Just below the scapula, on the right side, was a slight prominence.

DR. BLAKE said that after the removal of two quarts of fluid from the chest by aspiration the area of flatness extended from the base of the lung to the middle of the chest in front. On the second tapping the serum was tinged with blood.

ABNORMAL ELASTICITY OF SKIN.

DR. INGALLS then showed a photograph of a man on exhibition in Boston with an abnormal elasticity of the skin. A fold of skin could be taken at the clavicle and raised to the level of the eyes, and when released at once returned to its usual smoothness and position. This had been so from birth, but may have been increased by practice.

ABDOMINAL ANEURISM.

DR. STEVENS briefly mentioned a case of a man of sixty-three years who had an indistinct pulsation below the ensiform cartilage. Last June he went to Swampscott, and while out rowing was suddenly taken with severe pain in the epigastrium. Some eight weeks later the swelling below the cartilage had tripled in size, but there was no more pulsation than would be expected from a tumor lying in contact with the aorta. A diagnosis of malignant disease of the pancreas was made. The patient died suddenly, and at the autopsy an abdominal aneurism, the size of a hen's egg, was found. There was also a new dissecting aneurism of double the size filled with a clot.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

MALFORMED FŒTUS.

DR. GREEN exhibited a drawing of the fœtus, which he had seen in the summer, and gave the following account of the case: The woman, a prostitute, twenty-four years of age, primipara (or said to be so), sustained a severe fall when six weeks pregnant. When seven months pregnant she again fell — on the pave-

ment. She continued her vocation until within five days of labor, which was normal in every respect, resulting in the fœtus, a drawing of which was shown to the Society. It was an example of Förster's monopod (the left leg was wanting), and peropod (as wanting part of the right leg), or, in sum, a pero-monopod. Förster intimates that these deformities are caused very early in pregnancy, from the second to the sixth week. Dr. Green suggested that the accident at the sixth week was perhaps the cause of the abnormity.

TWO CASES OF UTERINE POLYPUS.[1]

DR. MINOT reported the cases and exhibited the specimens.

DR. FORSTER reported the case of an Irishwoman who presented a tumor between the labia. On the Sunday previous to the meeting Dr. Forster removed the mass, which was then external, and attached by a pedicle about five inches in length. Hæmorrhage had existed during four, and protrusion for the last two, months. The tumor in the vagina had acted as a valve, causing the blood to be forced past it. It was exhibited to the Society, was of a flattened oval shape, and measured originally about one and a half inches in its longest diameter.

DR. BAKER asked Dr. Minot if he used scissors or écraseur in the removal of fibroid polypi.

DR. MINOT replied that he always used scissors if possible, and he had never known hæmorrhage to follow; but when the tumor is very large it is sometimes very difficult, or even impossible, to reach the pedicle with scissors, and the écraseur is then very serviceable.

DR. BAKER said that he agreed entirely with Dr. Minot, notwithstanding the fact that the text-books lay so much stress upon the écraseur. The contractile power of the uterus excited by the traction of the polypus in drawing it down is such that hæmorrhage from it is very rare.

DR. ELLIOT stated that he had recently had a case which brought up the question of the cause of hæmorrhage in these cases of uterine fibroid. It was well known that small fibroids contained very few large vessels, and yet they may give rise to terrible hæmorrhages. Looking up the literature he had found very little attention paid to the matter. In the cases mentioned the tumors were taken to Dr. Gannett, who found the investing mucous membrane much thickened, its vessels and glands enlarged, in fine, a condition of hyperplastic endometritis, which is a well-known cause of uterine hæmorrhage. In the case of a middle-aged woman who had been flowing for about fifteen years, at times, and who had had no children, Dr. Elliot found a loss of blood at each menstruation sufficient to saturate sixty or seventy napkins. The patient was seen in consultation with Dr. John Homans; the uterus was dilated, and a small polypus removed. But at the next catamenia the patient flowed about the same as before. After watching the case awhile Dr. Elliot determined to scrape out the uterus. This, after dilatation, was accordingly done, and a hyperplastic endometritis was relieved, so that, at the next menstruation, the flow was in normal amount. Dr. Elliot thought that the rupture of a blood-vessel was very seldom the cause of these hæmorrhages, that the strangulation of the pedicle by uterine contractions causing a state of passive congestion in the tumor was not an infrequent cause, but that this hyperplastic condition of the mucous membrane of either the tumor or the uterus, or of both together, was by far the most common cause.

[1] See page 58 of this number of the JOURNAL.

DERMOID CYST OF THE RIGHT OVARY.

DR. BLAKE read the case. (Paper reserved for revision.) Specimens of hair and teeth from the cyst were exhibited to the Society.

DR. BAKER presented a specimen of hair not unlike in character and origin that just shown by Dr. Blake. The case was of a hospital patient four years ago, and was considered to be one of abscess. The aspirator needle carried up behind the uterus gave a fluid-like pus; a free incision opened the peritoneal cavity, into which the air entered with a good deal of noise. The fluid proved to be not pus, but fat, and upon this circumstance was founded the diagnosis of dermoid cyst. An incision about one inch long was made into the cyst, and its edges united with those of a corresponding incision in the posterior cul-de-sac. Injections were repeatedly made, at one time a mass of hair presented and was removed, later a mass of tissue containing teeth and bone, which was also taken away. Knowing the difficulty of destroying the interior of the cyst, Dr. Baker passed a Sims' speculum *into* it and applied the thermo-cautery to the whole surface. This was four years ago, and the patient has remained well since, with no appearance of any return of the cyst.

DIAGNOSIS AND PATHOLOGY OF DERMOID CYSTS.

DR. GANNETT, in response to a general request, stated that if hair is found the diagnosis is easy enough; it is difficult to get hair through the exploring needle, but fat comes, and this is diagnostic, particularly in the region of the ovary. Dr. Gannett showed two specimens of the fat.

As to the pathology, it was originally supposed, fifty years or more ago, that dermoid cysts represented the results of an ovarian pregnancy, and where such tumors were found post mortem in unmarried women serious aspersions were raised against the moral character of the individual. But as later similar tumors were found in young children before the age of puberty, and further, in the male testicle, it became obvious that some new theory of their origin was necessary.

In later years they have been thought to be congenital; that during fœtal life a portion of embryonic tissue remained in the ovary, and later developed into a dermoid cyst.

Recently Waldeyer has advanced the idea that as any ovarian epithelial cell may become an ovum, so any such cell may develop into one of these tumors.

Dr. Gannett mentioned the fact of the association of dermoid cysts with other tumors of the ovary, he having observed two cases of combination of sarcoma with dermoids, and three cases of dermoid cyst in connection with well-marked cystomata.

THE DELIVERY OF THE SECOND FŒTUS IN LABOR WITH TWINS.

DR. GREEN read the paper.

DR. REYNOLDS said that the statistics quoted in regard to varieties of twin presentations had interested him and had surprised him. The general results differed very materially from those with which he had hitherto been familiar.

Bearing in mind the shape of the pregnant uterus, and the alterations impressed upon it at the time of labor, it had always seemed to him instructive to note

the very great predominance of the longitudinal attitude of the two children. It should be remembered that the folded breech forms the bulky end of the fœtus, that the hard and compact head does not need for its accommodation an equal amount of room. On the other hand the fundus of the uterus and the upper part of the body are proportionally more developed.

In accordance with these facts that arrangement in which both children are placed longitudinally and both heads are in the lower half of the uterus is the more common; a longitudinal attitude with one head at the fundus and one low down comes next in order of frequency, and a similar attitude with both heads at the fundus is comparatively rare; the tendency toward a presentation of the head end of the offspring thus asserting itself in multiple pregnancy as it does in the single form, and as it does also with the multiple pregnancy of the lower animals.

The uterus which has lately undergone distention from twins must often resemble in its want of power, and in its flaccid condition, that of a multipara in whose case successive children have been forced with difficulty through a pelvis somewhat contracted. It may well be conceived that under these circumstances a trunk presentation of the second child may easily develop, as the writer of the present paper has so forcibly urged. Without very convincing testimony it is hard to believe that before labor either one of the living twins can hold a transverse attitude.

Four years ago Dr. Reynolds attended a third pregnancy, when a mother of slight and delicate frame gave birth to two large males. Both heads were at the fundus; over that which lay at the left angle such intense discomfort was felt for many days before birth that no change of position could be tolerated, the patient lying all the time on one side, "unable to move," and in pitiful distress.

In the light of some recent contributions to the study of the mechanism of labor the view which the paper takes, that the point at which the vertebral column of the fœtus meets the head is the main factor, or even the only agent, in bringing about flexion of the head or its extension, is perhaps somewhat too absolute.

DR. GREEN said that if the uterus were emptied too quickly there would be increased danger of post-partum hæmorrhage. He also considered the dorsal position as occasioning greater danger to the perinæum upon the descent of the fœtus.

DR. BLAKE said that he had considerable experience with cases of twin birth. He had seldom found the membranes of the second child ruptured, and it had been his custom to wait from ten to twenty minutes after the birth of the first child and then perform the rupture. He had never had any difficulty with cases of twins; never had had to turn the child. In natural labors he preferred the dorsal position of the mother.

DR. LYMAN asked Dr. Green if he thought there were greater danger of rupture of the perinæum with the patient lying on her back than when on her side. He thought the difference in results between Paris and London, where these different positions were in vogue, did not sustain any such view.

DR. GREEN replied that the weight of the head on the perinæum would be greater in the dorsal position.

DR. RICHARDSON asked if the weight of the head was any factor whatever in the cause of ruptured perinæum.

DR. GREEN said that he had accepted the statement of books, and had had regard to the custom in Germany. Rupture no doubt depended in great measure upon the condition of the perinæum.

DR. RICHARDSON stated that in the few cases of twins which he had looked up the great majority of bad cases were due to interference, and especially to attempts to hurry on the labor.

DR. GREEN explained that he did not advise interference but avoidance; during the period of uterine inactivity he would keep the hand on the uterus in order to maintain a correct position.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

DISCUSSION ON NERVOUS PROSTRATION.

DECEMBER 19, 1883. DR. MILLS, in opening the discussion on Dr. Bartholow's paper,[1] by request of the chair, said: I understand that Dr. Bartholow denies that a disease exists, primarily nervous in origin, which can be called neurasthenia. He classes all cases so called under two heads, congestive and anæmic, and holds that the symptoms presented are chiefly reflex effects of digestive or other visceral troubles. I have no doubt that many cases are to be thus explained, but we have others in which the cerebral condition is primary. In cases with the symptoms as detailed in the paper we may, perhaps, clearly ascribe them to the causes and conditions referred to by Dr. Bartholow, but other cases may be explained in a different manner.

In individuals whose higher ganglionic centres are so constituted, from bad inheritance or poor training, or both, that they cannot bear much strain, when subjected to this strain these centres exhaust. We have certain functions called organic functions, respiration, vaso-motor action, etc., with centres in medulla oblongata and spinal cord. These functions must be maintained as long as the individual exists. Their centres must be nourished and sustained in a uniform way. Presiding over automatic movements, they must be kept in the highest tone, must have good blood and plenty of it. It is a principle brought out in the paper that local diversion of blood to any one organ or part will take it from other organs or parts; and we may, in accordance with this, have the higher brain diverting blood from the lower, or lower brain from the higher. We have *nervous* symptoms, the result of this overstrain of nerve centres, and the disturbance of the equilibrium of the circulation, thereby brought about.

I am inclined to differ from Dr. Bartholow and agree with Dr. Beard as to the propriety of the term "American disease." The social and business exigencies in this country are different, are more taxing than in Europe. In England, for instance, men become mature and enter public life at later periods than here. In France the difference is not so great, but the more absolute division of society into grades and castes prevents too fierce a struggle for high position. Here every man has the chance to rise to the highest position, and men enter especially political life in youth. Americans are not trained for special lines of life work. They often attempt work too high for their mental powers and break down.

DR. TYSON: I have many times asked myself the question, "What is nervous prostration?" The an-

[1] See page 53 of this number of the JOURNAL.

swer was always, "It is not a nervous disease, certainly not an organic nervous disease, and probably not a functional one. It is rather a condition of muscular fatigue, and it may be nervous fatigue. Most of the cases are accompanied by digestive derangements, which are responsible for many of the symptoms, most of which are reflex." At the same time I admit that some of the symptoms are puzzling, and not easily explained. Among these is the pain in the back of the head, often referred to as the result of "nerve tire," and sometimes regarded as an important indication of cerebral disorder, which it is not. In women uterine derangement is often responsible for the complex symptoms known as nervous prostration.

The point, however, that attracted me in the paper read was allusion to the condition of the urine in one of the cases. It was described as dark-brown, of high specific gravity, containing a trace of sugar. I have seen such cases, and think it not unlikely that the apparent sugar reaction is really due to uric acid, which is often abundantly present in these urines of deranged digestion. If we get rid of the excess of uric acid by allowing it to precipitate spontaneously, or precipitate it by the addition of an acid, the sugar reaction with the copper tests does not take place. Other characters of the urine, particularly its dark color and scantiness, are not usual to sugar-containing urine.

DR. ESKRIDGE: The most important point in the subject is whether the condition called neurasthenia is primarily a nervous disorder or a disturbance in other parts of the body. I would have been better pleased if Dr. Mills had elaborated more thoroughly his statements as to the organic functions. He said these functions must be well nourished, and that failure in them is due to failure in the upper nervous system. I would have liked if he had gone further in his explanation. Is this failure due to disturbance in the brain and upper portion of spinal cord primarily, or to failure in other parts of the body? Those who have paid attention to this subject say that break-down does not occur unconnected with either worry or vice. I have never seen a case from mental overwork alone. In five cases of neurasthenia of which I have notes one was from sexual excess; two from worry connected with family troubles; another from alcoholic excess with sexual vices; and the fifth from sunstroke followed by oversexual indulgences. In the last case it seemed as if the brain was primarily at fault. It appears to me that nervous prostration, so called, is a depressed condition of the whole system, the trouble manifesting itself as a general nervous condition secondarily after organs other than the brain have been primarily affected. The therapeutics also favor this view because the cases are benefited not by agents addressed to the nervous system alone, but by hygienic and tonic measures.

DR. GLASGOW: I have come to regard these cases as not nervous in origin, but as largely due to digestive troubles. They are cured by attention to the disordered functions. I have known a short residence in Atlantic City, without any medical treatment, to suffice for a cure.

DR. BARTHOLOW, in closing the discussion, said: The great question is, Is neurasthenia functional or does it arise from organic change in the nervous system? I maintain that it is largely reflex and frequently from gastric disturbance. Neurasthenia in women is associated with an anæmic condition and ovarian and uterine disorders. They are pale and weak, and if they are subjected to any moral or mental trouble give way, but if they are well nourished sustain any kind of shocks without suffering in health.

In regard to the term "American disease," and to the claim that the peculiar conditions of American life are causative of neurasthenia, it will suffice to say that in some of the European states a higher grade of education is maintained than in this country. In Prussia, for instance, every one is taught to read; education is more general than in Massachusetts. The struggle to maintain existence, and hence the demands on the brain, are severer than here, and although neurasthenia is said to be uncommon there are diseases similar to that called nervous exhaustion in this country arising from similar causes.

Worry has been mentioned as a cause of nervous exhaustion. Now worry hurts a man just in proportion to his condition. If he is in good health or phlegmatic in temperament the worry may be well borne, but if he is out of health worry will have a powerful effect on the nervous system. I do not deny that various causes may produce brain disease, but I deny that the so-called neurasthenia is due to an organic lesion of the nervous system. I maintain that it is part of a morbid complexus, a reflex condition, in large part, of maladies situated in the stomach, the liver, the uterus, or other organs.

Recent Literature.

The Dissector's Manual. By G. W. BRUCE-CLARKE, F. R. C. S., and CHARLES BARRETT LOCKWOOD, F. R. C. S. Philadelphia: Henry C. Lea's Son & Co. 1883.

This is a very excellent manual for the use of the student who desires to learn anatomy. It has the merit of not being in the least a compendium. It does not, for instance, give the origins and insertions of muscles, but it states what is to be found in each region, and tells how to find it. The authors insist that dissecting a part is not learning it, but that the student should go over the structures that he has exposed, comparing them with the accounts in the text-books of descriptive anatomy. The methods of demonstration seem to us very satisfactory, and we are especially glad that much attention is given to the dissection and study of the viscera. There are many wood-cuts, which for the most part are good and instructive, but we must say that the diagrams of the front and back of the body that make the frontispiece are extremely distorted and inaccurate. There is a very interesting chapter at the end on "dissecting questions," which form a part of some of the examinations in England. The student is asked to tell how any particular structure may be exposed, enumerating the parts that are exposed or divided in reaching it. The book, which is of the same series as Mr. Treves's Applied Anatomy, is neat and convenient. We are glad to recommend it.

T. D.

— "Boss, hab you gat any dem confound cunfortic pills?" "Yes. Do you want them plain or coated?" "Dunno. I want dem ones dat's whitewashed." He got 'em. — *Texas Siftings.*

Medical and Surgical Journal.

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STATE PROSECUTIONS FOR ADULTERATED DRUGS.

THE daily papers of this city recently published in full the correspondence between the Boston Druggists' Association and the Health Committee of the State Board charged with executing the law against adulteration of drugs, a correspondence referred to in an editorial article of our issue of December 13th last. We believe the following statements bearing on this correspondence are correct, and should be kept in mind should any attempt be made to induce the present legislature of Massachusetts to repeal or render inoperative a law, more necessary than we had previously supposed, for the protection of the public at large and of the medical profession in the discharge of its duties to the public.

In each of the six prosecutions for adulterated drugs which have been made by the Massachusetts Board of Health, Lunacy, and Charity the adulteration has been proved.

In each case the drug was shown to be more than thirty per cent. below the pharmacopœial standard, about one fourth, one half, or two thirds being the most common proportions.

In no case was prosecution made until after a second violation of the law had been detected, and in all cases but one in the same drug. In that one case, however, there had been two violations in regard to another drug. The drugs were in every instance prepared by the firm proceeded against, and were sold either by a member of the firm or else in his immediate presence, and with his knowledge and consent.

In cases of adulterated drugs not prepared by the vendors, warning notices thereof, and not prosecutions, have followed the first detected violations of the statute.

ANNUAL REPORTS OF THE PRESIDENT AND TREASURER OF HARVARD UNIVERSITY, 1882–1883.

THE portion of these annual reports which particularly concerns the medical profession is that devoted to the Medical School and contributed by its dean. The completion of the new building, at a total expense of $321,415, of which possession was finally taken in October, has been previously noticed at length in our columns.

The whole number of students in attendance during the year was 240; during the first term 234; during the second term 219. Of these 116 had a literary or scientific degree. There were eighty-five applicants for the degree of Doctor of Medicine, of whom nine were rejected. Seventy received the degree of M. D. after a three years' course of study; six received the degree of M. D. after a four years' course; of these six, four received in addition the degree of A. M., two of these *cum laude*. The Fourth Class was composed of ten students, four of whom postponed graduation in order to become candidates for hospital appointments.

The results of the examinations for admission to the School are given in the following table: —

			Physics.	Latin.	English.	Elective.	Rejected.
1883.	June.	Offered.	25	25	25	25	3
		Conditioned.	8	8	5	3	
	Sept.	Offered.	18	18	18	18	1
		Conditioned.	2	9	4	2	

An elaborate table on page 99 of the report, whose length forbids reproduction, gives statistics of rejection at examinations in the different subjects studied by each class during the last four years. Those curious in the matter are referred to the original.

The following table, as last year, is given by the dean to show the increasing recognition of the value of the opportunities offered by the School for obtaining a medical education: —

NUMBER OF TERMS SPENT AT THE SCHOOL BY GRADUATES.

	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
Spent six terms.	22	14 47%	25 69%	40 65%	41 85%	62 88%	39 80%	49 81%	79 91%	67 88%
Spent five terms.	2	7	5 1%	9	4	2 2%	1 2%	6 10%	2 2%	4 5%
Spent four terms.	6	6	4 11%	8	3	3 4%	4 8%	4 6%	4 4%	4 5%
Spent three terms.	5	0	2 5%	1	0	2 2%	0	1 1%	0	1 1%
Spent two terms.	3	3 10%	0	3	0	1 1%	1 2%	0	1 1%	0
Total graduated.	38	30	36	61	48	70	45	60	86	76

In the Dental School the number of students was twenty-six.

The School of Veterinary Medicine submits its first annual report. At the examinations held in June and September eleven candidates presented themselves for admission, of whom two were rejected. With the new Veterinary Hospital on Village Street and the accom-

modations offered at the Bussey Farm advantages for the study of comparative anatomy, physiology, and pathology will be gradually developed.

In the main body of the report the President insists upon the views previously expressed by the Faculty of the college in regard to intercollegiate contests in athletic sports, namely, that they demand further regulation by agreement between the colleges whose students take part in them, and that this can be done without discouraging the promotion of physical exercise and manly sports among college students. The department of hygiene and physical training is reported as being in general in good condition, and the Hemenway Gymnasium as being each year more and more patronized.

The department of the university which seems to cause its President the least satisfaction is the Board of Overseers, which he finds altogether too venerable and conservative, the average age of the elected members being, he calculates, fifty-seven years.

Although having but a possibly indirect relation to medical education, we cannot forbear quoting in full the closing sentences of his report where expression is given to the President's dissatisfaction with this venerable Board: "When the Act of 1865 gave to the alumni the power of electing the overseers it was imagined the electors, the larger part of whom would be young men, might choose a youthful or inexperienced Board. The actual result has been quite the reverse. Only one of the present Board is under forty, only ten of the thirty elected members are under fifty, and the average age of the elected members is fifty-seven. No member of the Board graduated in arts later than 1866, and on an average the Board may be said to have graduated more than thirty-five years ago, at a time when the university was very unlike the institution of to-day. Such elderly men may be distinguished representatives of the alumni, and may, perhaps, be in a position to enjoy the advantage of advice from sons or grandsons now or recently members of the university, but their personal recollections of college life are less serviceable to them as university legislators than the recollections of much younger men would be."

One of the most important objects in all schemes of representative government — the independence of the legislative from the executive departments — has been accomplished with the existing Board of Overseers. Whether the interests of the university would be better served by younger or more pliant overseers is for each elector to decide for himself.

— A woman was fined forty-eight francs in one of the departments, says the French correspondent of the *Medical Press*, for having performed the Cæsarean operation on a woman who died suddenly in the first stage of labor. The operation was performed at the instigation of the priest, who wanted to baptize the child. The instrument used was a razor, and there appeared to have been no attempt made to preserve the child alive, as, after baptism, it was replaced. The incident created some scandal in the country.

QUARANTINE AND HEALTH, CHARITY AND LUNACY IN THE CITY AND STATE OF NEW YORK.

IN his last annual message the Governor of New York gives the following statistics in regard to the insane in that State: —

State Lunatic Asylum at Utica	600 patients.
Hudson River State Hospital	306 patients.
State Homœopathic Asylum	260 patients.
Buffalo State Asylum	329 patients.
Willard Asylum (chronic insane)	1740 patients.
Binghamton Asylum (chronic insane)	412 patients.
County poor-houses and asylums	1867 patients.
City almshouses and asylums	5010 patients.
In private asylums	493 patients.
Asylum for Insane Criminals	144 patients.
Asylum for Insane Emigrants	109 patients.
Total	11,270 patients.

Of this number 5015 are males, and 6255 females, and the total number given is 827 in excess of the number of insane reported for the previous year. We should like to have had the proportion of foreign and native born among these insane.

The following quotations are from the portions of the Governor's message referring to very important questions touching the quarantine and Health Officer of the port of New York: "In July, 1881, the Senate appointed a committee to investigate and ascertain the emoluments, and to examine into the administration, of the Health Officer, with a view of making the Quarantine Department self-sustaining, and framing such laws as may be of public interest. In concluding their report the committee state that they 'cannot refrain from expressing the opinion that the revenues of the Health Officer of the port of New York are out of all proportion to the professional skill and labor required to properly fill the office. Exceeding, as they do, the salary of any of the State officers, the Governor included, they constitute an anomaly in the administration of the Commonwealth which is uncalled for, inexcusable, and ought not to be permitted to continue.' Another fact appears in the evidence taken by the committee which is not referred to in their report. The present incumbent of the Health Office testified that in the year 1880 he paid between $9000 and $10,000 as a voluntary contribution to the party of which he was a member for political purposes. . . . In my judgment the Health Officer should be attached to the quarantine establishment, and be paid a fair salary, which, as well as the salaries of the other parties in charge of the department, and the cost of maintaining the buildings and property of the State used in connection therewith, should be met by fees and charges collected for services performed, which fees and charges should be fixed at no higher rate than is necessary to meet such expenses. The inauguration of such a system, it is believed, would insure an efficient administration in this important department, relieve the tax-payers of the State from present burdens, and subserve the interests of the commerce of the port."

In connection with the quarantine administration of the port the administration of the Health Department

of the city of New York naturally invites attention. In the former a reorganization is suggested, in the latter it has been effected.

The estimate for the expenses of the Board of Health of the City of New York for the year 1884 was $540,799, but the appropriation was reduced to $402,775 by the Board of Estimate and Apportionment. The service of the Board was reorganized on the 1st of January, and hereafter the Sanitary Bureau will consist of seven divisions. The first will include one chief inspector and ten assistant inspectors, and during the summer months fifty additional assistant inspectors are to be added. To the second division will be referred all matters relating to adulterations of food and drink, and to offensive trades, and it will consist of one chief inspector, two special inspectors for offensive trades, and for tea, coffee, etc., one chemist, four milk inspectors, and six fruit inspectors (for three months each). The third division, which will have charge of complaints about sidewalks, etc., and the enforcement of ordinances, will include thirty sanitary policemen. And the fourth division will consist of the inspectors of vaccination and disinfection and their assistants. The fifth division will be in charge of the hospitals and the steamboat of the department. In the sixth division there will be one chief inspector, ten inspectors, and three clerks. And the Bureau of Vital Statistics, having charge of the records of births, deaths, and marriages, and of the granting of burial permits, is to constitute the seventh division. The whole will be under the charge of a sanitary superintendent, who will also perform the duties of register of records, and an assistant sanitary superintendent, who will also be chief medical officer in charge of the fifth division. The Board of Estimate and Apportionment reduced the appropriation for the Department of Charities and Correction from $2,149,627.60, the amount asked for, to $1,774,105.10.

MEDICAL NOTES.

— We have just announced that the publication of the *Archives of Medicine* was to be suspended. We take pleasure in announcing that the publication, instead of being suspended as was at first announced, will be continued on the same general plan as that followed during the past six years.

— The new year has brought to us *The Æsculapian*, a new monthly journal of medicine and surgery, edited by Edward J. Bermingham, M. D., and published by Bermingham & Co., New York.

— An English physician states that he has known one of his prescriptions to be made up without his order to his patient more than three hundred times. He was paid for only one prescription.

— The *Waltham Backwoodsman*, a paper published to advocate the retention of the town form of government in Waltham, announces in its prospectus that "it will copy after its esteemed contemporaries in everything except blowing for a city government and publishing Warner's Safe Kidney Cure, Bull's Cough Syrup, and Lydia Pinkham's portrait;" in which matter it sets an example to certain so-called religious papers.

— The effectual separation of Milk and Water Streets by the Old South Church is supposed by certain antiquarians to be typical of the sentiments of the early inhabitants of Boston in regard to the mixture of two important articles of domestic consumption. The facts revealed by the milk analyst of the Massachusetts Health Board seem to show that the meandering of Spring Lane between the two streets left open the way for complications, as out of every ten specimens of milk examined nine showed an improper aqueous admixture.

— During the year 1883 there were reported to the Boston police 333 cases of runaway children, 89 of lost children, 251 of persons missing, and 23 of persons found dead. There have been reported to the department during the year 423 cases of sudden deaths, as follows: Murders, 5; suicides, 31; fatal accidents, 123; found drowned, 50; found dead, 27; burned to death, 7; other causes, 180.

NEW YORK.

— In his annual message Mayor Low, of Brooklyn, says, in regard to the water supply of that city, that there is literally no margin above its needs at present, and recommends the immediate enlargement of the distributing reservoir at Ridgewood to double its present size. In his opinion steps ought to be taken to secure an increase of 20,000,000 gallons daily, and eventually a supply of at least 100,000,000 gallons daily. The cost of this work, which would be distributed over several years, is estimated at about $4,500,000. He also recommends the appropriation of $1,500,000 or $2,000,000 to remedy the existing defects of the sewage system of the city.

— On the 9th of January a conference was held at the rooms of the Brooklyn Board of Health for the purpose of discussing the question of the prevention of contagious pleuro-pneumonia in cattle, at which representatives of the New York, Brooklyn, and State Boards of Health and of the United States Treasury Cattle Commission as well as a number of physicians from different parts of the State were present. The chairman, Dr. Raymond, Health Commissioner of Brooklyn, read a paper by Dr. McLean advocating inoculation, and a free discussion followed. At the conclusion of the debate Professor Law, of the Cattle Commission, presented a set of resolutions to the effect that Congress should be petitioned to appropriate a sufficient amount of money to stamp out contagious pleuro-pneumonia by providing for the appointment of a number of veterinaries to inspect all herds in infected districts, to indemnify owners for all cattle slaughtered by the government, and to forbid the movement of all cattle out of any infected State which will not take measures to stamp out the disease. The resolutions were adopted, and a committee was appointed to present them at a conference to be held on the same subject on the following day in Washington.

— Mr. Charles Lanier, treasurer of the Hospital Saturday and Sunday Association, announces that up

to January 9th the contributions, so far as reported, amounted to $22,532.85.

— The will of Mr. Julius Hallgarten, a wealthy New York banker, who died recently in Switzerland, provides for a large number of charitable requests, among which are $50,000 each to the University of the City of New York and Dartmouth College, and $10,000 to Mount Sinai Hospital, New York.

— A committee composed of some of the leading physicians of New York, Boston, Philadelphia, Chicago, and other cities, of which Dr. Fordyce Barker is chairman, and Dr. George F. Shrady, editor of the *Medical Record*, secretary, have issued an appeal for contributions towards the erection of a monument in honor of the late Dr. J. Marion Sims.

— At a meeting of the Medico-Legal Society held January 9th the recently elected officers were installed. In his inaugural address the President, Mr. Clark Bell, stated that during the past year the membership had been increased from 267 to 314, of which number 147 were physicians and 154 lawyers. The draft of a bill was submitted which provides for the appointment of medical examiners throughout the State whose duty it shall be to pass upon the mental condition of persons before the courts in regard to whose sanity there is any question. A special committee was instructed to secure the passage of the bill by the Legislature if possible.

— At a meeting of the Society of Medical Jurisprudence and State Medicine held January 10th Dr. E. C. Spitzka read a paper on the Execution of an Insane Murderer. The murderer referred to was Graves, recently executed at Newark, N. J., in whose behalf the Governor and Court of Pardons refused to interfere. He said it was the most melancholy case of an insane criminal that had ever come to his knowledge, seven medical experts having pronounced Graves insane, and the post-mortem examination having fully substantiated their opinions.

PHILADELPHIA.

— The annual meeting of the Philadelphia County Medical Society for the election of officers and new members was held January 2d, when the following officers were elected for the ensuing year: William M. Welch, President (second term); William S. Forbes and S. R. Knight, Vice-Presidents; Henry Leffmann, Recording and Reporting Secretary; M. S. French, Corresponding Secretary; L. K. Baldwin, Treasurer; C. M. Seltzer, Librarian; H. St. Clair Ash, Censor. At this meeting there were among the candidates to be balloted for the names of two prominent women physicians connected with the Women's Medical College in this city. They failed to get the required two-thirds vote.

— A very full meeting of the College of Physicians was held January 3d, to listen to the address of the retiring President, Prof. Alfred Stillé, who devoted his time principally to a historical sketch of the development and growth of the library, which now contains over 26,000 volumes. Papers were read at the same meeting by Dr. Harrison Allen, on the Chronic Nasal Catarrh of Children, by Dr. Horatio C. Wood, on the Clinical Aspects of Brain Syphilis, and by Dr. J. Cheston Morris, on an interesting case with specimens.

The college is now in a prosperous condition, and every department shows new and increased interest and activity. A fund has been started for enlarging the building by adding another floor, one of the Fellows contributing a thousand dollars to this object, and has promised further assistance if needed.

The Nurse Registry Bureau had a successful year, and has contributed a considerable amount to the uses of the library. It is becoming each year better known and more generally used, until it is now considered a necessity.

— At the Conversational meeting of November 9th of the County Medical Society, Dr. John Ashhurst, Jr., presented a communication on the Treatment of Chancroid and Syphilis; discussion upon this paper being opened by Dr. J. William White. A large attendance of the members was had, and a general discussion held; full of interest, but, as might be inferred from the subject, containing little that was new.

— The Alumni Association of the Jefferson Medical College will give a reception to Prof. Theophilus Parvin on the 28th of January at the St. George Hotel, in this city. A large attendance is expected, and the reception will undoubtedly constitute one of the medical events of the winter.

— At the Pennsylvania Hospital Dr. J. M. Da Costa is using hypodermic injections of iron for anæmia, in a case of combined malarial toxæmia and lardaceous disease of the viscera, including the intestinal glands. To the other solutions for this purpose he prefers a double salt produced by the addition of pyrophosphate of iron to a solution of citrate of sodium. Two grains of the salt, in this form, are given every day, varying the points of puncture, but generally administering it under the skin of the extremities; in this form no abscesses have been observed. With other solutions of iron, including dialysed iron, abscesses were quite common even with every precaution as to the cleanliness of the syringe. In a case last winter of idiopathic anæmia (pernicious?) these injections not only arrested the patient in a downward course, but actually worked such a change that his strength and appetite returned and he was afterwards discharged in good health. This case is not called pernicious anæmia because the patient did not die; but if an opinion could be based upon the previous course of the disease, and his chlorotic condition at the time of the change in his treatment, no other diagnosis and no other prognosis would have been entertained than that mentioned by any ordinary observer.

— The leading druggists of this city becoming disgusted with the patent medicine traffic have decided after the 1st inst., not to deal in those proprietary medicines which are sold as merchandise to non-medical dealers. It is now, and has been for some time, indeed, considered very bad "tone" for a scientific pharmacist to exhibit patent medicines in show cases, or have their lying placards hung up in the store; much less would one of our principal apothecaries think of as-

suming the responsibility of recommending articles of whose composition he is ignorant. The druggists all over the country are alive to this evil, which has grown to such proportions as to seriously threaten the future of legitimate pharmacy. Fortunately the public has acquired a healthy skepticism with regard to advertisements of panaceas, even when they appear in religious papers, and endorsed by clergymen and members of Congress. How soon will this country attain to the degree of civilization of Japan, and appoint a government commission to examine all patent medicines that are offered for sale, and publish the formula upon each package sold. We do it with guano, why not with cough syrups?

— The recent annual report of the Library Committee of the College of Physicians showed that there have been added to the library this year 2186 volumes, 2107 pamphlets, 2862 numbers of journals.

The total number of volumes now in the library is 26,359. For the ensuing year the library will be kept open, except on Sundays and legal holidays, from ten o'clock A. M. to five P. M.

There are in the collection 3381 duplicates, and particular attention was called to this fact, inasmuch as it affords a rare opportunity to other libraries of augmenting their list at comparatively small expense.

The report of the Committee on the Directory for Nurses showed that the

Number of nurses registered December 1, 1882		209
Added during the year	104	
Lost by striking from roll	6	
Lost by withdrawal	4	10
Net gain		94
Present number		303

Total number of nurses furnished during the year 733; an average per month of 61, as against 49 for last year.

Largest number (February)	84
Smallest number (August)	34
Sent outside of the city, but within the State	63
Sent to other States	59
Wet nurses furnished	17
Of registered nurses, there are males	39
Of registered nurses, there are females	264
Graduates of training schools	60
Non-graduates	243

The amount given to the library during the last year was $200, and for the present year $300. Many physicians take great trouble and waste much valuable time in hunting up nurses personally; or, having obtained a good nurse through the Directory, they transfer her from one patient to another directly, instead of through the Directory. Were they to use the Directory they would obtain the *same* nurses and add to the income of the Directory, and so to the appropriation to the library.

It is the desire of the committee to make the Directory also a bureau for all needed information for the sick; and they have in contemplation measures by which if any one desires to obtain boarding in the country or at the sea-side for cases of whooping-cough, or for recent cases of measles, scarlet fever, or diphtheria, and for information concerning all appliances for the sick, such as invalid chairs, wheel and other crutches, bed-rests, fracture, water, or air beds, etc., he may obtain the object he seeks at the Directory.

Correspondence.

"SEA-WATER" (?) AND SALT IN THE STREETS.

MR. EDITOR, — Will you permit me to ask "Nesciens" when and where any Board of Health or any individual ever protested, or had the chance to protest, against watering the streets with "*sea* water"? Will "Nesciens" also tell us whether he can imagine any harm in carting back upon and evaporating from the surface of the streets the *sewage* which has at great expense been carried off beneath those very streets?

Will he further tell us whether, should the streets at any time become dry after the dust became thoroughly saline from pure sea-water, such saline particles would, more than ordinary dust, produce agreeable sensations and healthful results when applied to the mucous membranes of eyes, nose, and air passages by the unrelenting zephyrs?

Will he also tell us in what city it is that horses' feet "do not ordinarily come near the rails"? I had supposed that in the vicinity of the rails was just where horses' feet do come, especially of the pair of horses which precede between the rails each horse car that runs upon the rails, and that the mingling of salt and ice produced an intensely cold and corrosive mixture, which not only must be directly injurious and uncomfortable to the feet of the horses, but must produce a temporary shrinkage of the shoes and a permanent rusting of the nails that could not be advantageous.

QUÆRENS.

CAMBRIDGE, *January* 12, 1884.

SEA-WATER FOR STREETS; SALT ON STREET RAILWAYS.

BOSTON, *January* 13, 1884.

MR. EDITOR, — Permit me to answer the questions in your last issue of the JOURNAL by "Nesciens" on Sea-Water for Streets, Salt on Street Railways. He asks four different questions concerning things which he seems to think are naturally innocent, wonders that boards of health denounce them, and that the courts are besieged to put a stop to such proceedings.

First and *second*. "What is there injurious to health in watering streets with sea-water or putting salt on street railway tracks?"

Third. After admitting the great cold produced upon the horses' feet by the mixture of salt and snow, and the irritation to their "sore or tender hoofs," he asks, "What has it to do with the public health?"

Fourth. "How can the public health be injured by watering the streets with sea-water in summer (repetition of question two) or by running off into drains and cesspools in winter of salted ice-water slightly ferrated?" etc.

Although in a position to hear such complaints if they were made, I have never before heard that any one objected to the watering of streets in summer with *clean* sea-water or of running off the abominable salted slush from the streets in winter. Boards of health

and others who have considered the matter prefer the salt water for streets in summer on account of being cheaper than fresh water, doing better service, and being a good antiseptic.

I don't know that any one claims any immediate connection between the sufferings of our dumb animals who draw us over the streets with sore and tender feet and the public health. I hope the allusion to the poor horse by Nesciens was not meant to be as *cold*-hearted as it seems.

The real question here is the salting of railroad tracks and its connection with the public health.

Whenever the railroad tracks are salted nearly the whole street becomes affected through the use of the snow plow at the intersection of streets and large crossings. Where the most travel is found the most salt is used, and the worst condition of things exists. The salt and snow or ice make a freezing-mixture in which no one can long stand or walk with ordinary protection without loss of comfort and danger to his health. It clings to the feet and cannot be avoided when leaving a car or crossing a street. When the temperature rises and thawing begins the streets are turned into ponds of salted slush too quickly to be cared for, and people have to go with wet and cold feet through the streets on account of salted car tracks. Do I need to add that cold and wet feet caused by the salt and snow mixture are prejudicial to the health and comfort of our citizens, or that most people will see the want of similarity between a "dip into the ocean itself for health's sake," followed by the well cared-for reaction, and walking about the streets with cold feet in a freezing-mixture of salt and snow?

I am compelled to take issue with "Nesciens" as to the innocence of salted snow in our streets, and claim that the health and comfort of our citizens are disturbed by it, and that our Boards of Health are looked to for protection against this evil by thousands of persons who have denounced it.

The courts have not been "besieged to stop such proceedings," but have been properly applied to when necessary in the enforcement of the health order. The "Boards of Health" have not found it difficult to furnish the necessary evidence to convict the violators of the salt order, and anticipate none in the future.

S. H. D.

Miscellany.

OBITUARIES. DR. THOMAS W. PERRY. DR. GEORGE C. LAWRENCE.

DR. THOMAS W. PERRY, a member of the Rhode Island Medical Society, and for many years a practitioner in Providence, died suddenly in this city, on the 5th instant, in the office of Dr. Bowditch, of heart disease. He was born in Hopkinton, R. I., was the son of a physician, with whom he began his medical studies, afterwards continuing them in the office of Dr. Bowen, of Connecticut, and in a school in New York. He entered practice at Wilkinsonville, now Putnam, Conn., but afterward removed to Central Falls, R. I., and subsequently to Providence, where he has had an extensive and successful practice. Dr. Perry faithfully served the country for nine months during the rebellion as surgeon of the Eleventh Regiment Rhode Island Volunteers. He was sixty years of age.

GEORGE CARLISLE LAWRENCE, M. D., a member oft he Massachusetts Medical Society, and one of the oldest and most prominent physicians of Berkshire County, died suddenly on the evening of the 6th inst., at North Adams, of typhoid fever, after an illness of a few days.

JOINT STANDING COMMITTEE ON PUBLIC HEALTH OF MASSACHUSETTS LEGISLATURE.

THE following are the names and occupations of the members of the Joint Standing Committee on Public Health of the Massachusetts Legislature: Messrs. Burden of Bristol, physician (Massachusetts Medical Society); Hodges, of Norfolk, banker, and Campbell, of Suffolk, coal-dealer, on the part of the Senate; Messrs. Bowker, of Boston, manufacturing chemist; Stowe, of Fall River, physician; Hastings, of Warren, physician (Massachusetts Medical Society); Murdock, of Leicester, manufacturer (but at one time a student of medicine); Burditt, of Clinton, apothecary; Hazen, of Shirley, farmer; Cutler, of Brimfield, life-insurance agent, and Peakes, of Georgetown, leather business, on the part of the House.

THE BEQUEST OF THE LATE DR. CALVIN ELLIS.

UNDER the will of the late Dr. Calvin Ellis we understand that Harvard University becomes residuary legatee of his property, which is quite considerable, under certain contingencies. The income is to be devoted to the support of scholarships and the payment of professors' salaries in the Medical School.

HYSTERICAL PSEUDO-PHTHISIS.

THE *Practitioner* (December, 1883) reproduces from *Centralblatt für Gynäcologie* (September 8th) an article by Dr. Fabre describing a condition simulating phthisis often found in young women suffering from chlorosis and hysteria. There is a cough, with expectoration, and even spitting of blood. Physical examination reveals dullness at the apex (usually on the right side), feeble respiration, and occasional râles. The author regards these symptoms as due to a vaso-motor disturbance exciting a pulmonary congestion. Other organs may also be subject to functional disturbances. Obstinate anorexia, gastric pain, occasionally diarrhœa, but more frequently constipation, are not seldom present. The pulse is weak and frequent, like that of fever, although the temperature may be normal. Sometimes, however, there is elevated temperature, but it is only transitory, and regular evening exacerbations are never observed. The expectoration is not purulent, but may be mixed with blood. While in true phthisis there is emaciation, in these cases the patients often increase in weight. Sweating, as a rule, is not met with.

The differential diagnosis is often difficult, and the author relates that cases have not infrequently occurred in which a diagnosis of pulmonary consumption was made, but the patient nevertheless recovered. The condition may exist without material improvement for months, or even years.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 5, 1884.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	576	199	14.62	16.70	1.22	5.57	1.39
Philadelphia	846,984	427	142	20.83	11.47	3.98	11.23	3.04
Brooklyn	566,689	257	103	16.38	13.65	—	6.63	1.95
Chicago	503,304	186	89	29.05	6.46	2.15	13.37	1.18
Boston	362,535	177	48	15.68	10.64	2.80	3.36	4.44
St. Louis	350,522	162	72	27.30	12.35	—	15.50	6.52
Baltimore	332,190	154	77	24.05	14.30	—	8.45	3.25
Cincinnati	255,708	103	26	10.67	18.43	4.85	2.91	.97
New Orleans	216,140	157	33	13.44	16.00	3.20	3.84	—
District of Columbia	177,638	115	46	17.30	19.55	1.70	.84	1.70
Pittsburg (1883)	175,000	66	26	18.24	9.12	7.60	9.12	—
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	59	29	15.21	10.14	1.69	3.38	—
Providence (1883)	116,755	47	12	17.04	19.17	4.36	6.49	—
New Haven (1883)	73,000	7	0	—	14.29	—	—	—
Charleston	49,999	30	11	13.33	3.33	3.33	6.66	—
Nashville	43,461	14	5	14.28	7.14	7.14	—	—
Lowell	59,485	33	12	21.21	12.12	6.06	6.06	3.03
Worcester	58,295	20	9	20.00	5.00	—	10.00	10.00
Cambridge	52,740	9	0	22.22	55.55	11.11	11.11	—
Fall River	49,006	25	12	12.00	16.00	—	4.00	—
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	2	0	—	—	—	—	—
Springfield	33,340	11	1	18.18	—	—	9.09	—
Salem	27,598	14	7	21.42	—	—	7.14	7.14
New Bedford	26,875	13	3	7.69	15.38	—	—	—
Somerville	24,985	7	2	14.28	14.28	—	—	—
Holyoke	21,851	8	5	25.00	25.00	—	25.00	—
Chelsea	21,785	8	2	—	25.00	—	—	—
Taunton	21,213	4	1	—	25.00	—	—	—
Gloucester	19,329	3	0	33.33	33.33	—	33.33	—
Haverhill	18,475	—	—	—	—	—	—	—
Newton	16,995	7	1	—	28.56	—	—	—
Brockton	13,608	1	0	—	—	—	—	—
Newburyport	13,537	4	2	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	4	3	75.00	—	—	75.00	—
Sixty-three Massachusetts towns	251,386	83	11	7.60	20.40	2.40	2.40	1.20

Deaths reported 2783 (no report from Buffalo): under five years of age, 989: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 496, lung diseases 547, consumption 388, diphtheria and croup 200, scarlet fever 67, typhoid fever 55, diarrhœal diseases 46, measles 44, erysipelas 19, malarial fever 19, whooping-cough 16, cerebro-spinal meningitis 13, puerperal fever 12, small-pox four, typhus fever one. From *diarrhœal diseases*, New York 12, New Orleans 10, Brooklyn and Baltimore four each, Boston five, Philadelphia and Chicago three each, Cincinnati, Providence, Nashville, New Bedford, and Shrewsbury one each. From *measles*, Baltimore 13, New York 11, District of Columbia 10, Brooklyn six, Philadelphia two, Milwaukee and Providence one each. From *erysipelas*, Chicago five, New York and Brooklyn three each, Philadelphia and Boston two each, New Orleans, Charleston, Springfield, and Ashland one each. From *malarial fevers*, New Orleans five, New York four, Chicago three, Brooklyn, St. Louis, and Baltimore two each, Philadelphia one. From *whooping-cough*, New York five, Brooklyn three, St. Louis and District of Columbia two each, Philadelphia, Chicago, Pittsburg, Salem, and Ashland one each. From *cerebro-spinal meningitis*, Chicago three, New York, Lowell, and Fall River two each, Philadelphia, Salem, Somerville, and Dedham one each. From *puerperal fever*, Chicago three, Brooklyn, Boston, and St. Louis two each, Cincinnati, District of Columbia, and Providence one each. From *small-pox*, St. Louis two, Philadelphia and New Orleans one each. From *typhus fever*, Chicago one.

Six cases of small-pox were reported in St. Louis, Nashville one; scarlet fever 55, diphtheria 26, and typhoid fever eight in Boston; scarlet fever 29, and diphtheria nine in Milwaukee.

In the 83 cities and towns of Massachusetts, with an estimated population of 1,218,000 (estimated population of the State 1,922,530), the total death-rate for the week was 18.00 against 21.05 and 18.60 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending December 22d, the death-rate was 21.9. Deaths reported 3624: acute diseases of the respiratory organs (London) 391, scarlet fever 129, measles 126, whooping-cough 77, fever 73, diphtheria 30, diarrhœa 30, small-pox (Birmingham four, London and Sunderland two each) eight. The death-rates ranged from 15.0 in Bolton to 29.0 in Halifax; Bradford 16.6; Nottingham 17.3; Sunderland 21.1; London 21.2; Leeds 21.9; Birmingham 22.9; Sheffield 23.1; Liverpool 24.2; Manchester 26.3; Newcastle-on-Tyne 27.6. In Edinburgh 16.6; Dublin 26; Glasgow 36.1.

For the week ending December 15th, in 170 German cities and towns, with an estimated population of 8,655,232, the death-rate was 19.2. Deaths reported 4052; under five years of age, 1853; consumption 567, lung diseases 492, diphtheria and croup 293, diarrhœal diseases 114, scarlet fever 96, measles and rötheln 94, whooping-cough 61, typhoid fever 46, puerperal fever 18. The death-rates ranged from 13.4 in Würzburg to 39 in Liegnitz; Königsberg 30.8; Breslau 31.8; Munich 29.3; Dresden 26.6; Berlin 22.5; Leipzig 27.2; Hamburg 24.9; Cologne 23.8; Frankfort a. M. 18.9; Strasburg 21.

The meteorological record for the week ending January 5th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Dec.–Jan., 1883–4.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7. 23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 30	30.174	27	33	23	73	88	88	83	SW	N	N	3	6	6	O	O	O	—	—
Mon., 31	30.238	28	30	26	94	86	98	93	N	N	N	5	10	6	O	O	S	—	—
Tues., 1	30.111	29	33	24	100	100	100	100	NW	N	N	7	9	6	W	O	W	—	—
Wed., 2	29.499	32	44	25	100	100	61	87	E	NE	W	22	8	18	R	R	O	—	—
Thurs., 3	29.708	24	31	20	61	54	70	62	W	W	W	15	16	18	C	C	O	—	—
Fri., 4	30.052	12	21	8	70	48	60	59	W	SW	W	12	24	11	C	F	C	—	—
Sat., 5	30.015	9	14	6	68	68	63	66	W	W	W	12	14	15	O	O	C	—	—
Mean, the Week.	29.971	23	29	19				79										41.35	1.84

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening; W., sleet.

RESOLUTIONS ON THE DEATH OF THE LATE DR. S. P. DRESSER.

At a meeting of the Berkshire District Medical Society, held at Pittsfield, December 26, 1883, the following preamble and resolutions were unanimously passed: —

Whereas, Dr. Simeon P. Dresser, of Hinsdale, has been stricken down in the full meridian of life and in the midst of his usefulness, we his Fellows deplore his sad and sudden death, and our own painful sense of the bereavement we have sustained therefrom.

Resolved, That we recognize an irreparable loss to the Society to which he belonged and to the community in which he so usefully labored.

Resolved, That his social and genial nature endeared him as a companion to every one brought within his influence.

Resolved, That we will cherish his memory as a sound and able physician, and skillful surgeon.

Resolved, That we will transmit to the family of our deceased brother a copy of our proceedings and resolutions, together with our deep condolence upon the calamity which has overtaken them.

A. M. Smith,
F. K. Paddock,
William M. Mercer.

ACTION OF THE PROVIDENCE MEDICAL ASSOCIATION UPON THE DEATH OF DR. T. W. PERRY.

At a regular meeting, held January 7, 1884, the Vice-president, Dr. William J. Burge, occupied the chair, and appointed Drs. J. W. C. Ely, E. T. Caswell, and Charles O'Leary a committee to draft a minute relative to the death of Dr. T. W. Perry, which occurred, suddenly, of angina pectoris, at the office of Dr. Bowditch, Boston, on the 5th instant.

The committee submitted the following, which was unanimously adopted: —

"In the death of Dr. Thomas W. Perry the Society has lost a member of twenty years' standing, who had achieved an honorable position as a practitioner, and by the qualities of his heart, his cheerfulness, and his zeal, secured the affection of his large circle of patients. His professional brethren recognized in him one who was always ready to learn and to appreciate fully the attainments of others. Amid various trials and afflictions he bore himself with fortitude, and was prepared for the final change whenever it might come to him."

It was also voted that the above be entered upon the records of the Association. William R. White, M. D., *Secretary.*

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM DECEMBER 28, 1883, TO JANUARY 11, 1884.

Appel, Daniel M., captain and assistant surgeon, having relinquished the unexpired portion of leave of absence granted by S. O. 68, headquarters Division of the Atlantic, November 16, 1883, and reported for assignment, assigned to duty at Fort Porter, N. Y. Paragraph 2, S. O. 247, Department of the East, December 29, 1883.

Brown, P. R., captain and assistant surgeon. Assigned to duty at Fort Huachuca, A. T. Paragraph 9, S. O. 119, Department of Arizona, December 27, 1883.

Havard, Valery, captain and assistant surgeon. Assigned to duty in charge of office of medical director, Department of Texas, during the temporary absence of that officer. Paragraph 2, S. O. 164, Department of Texas, December 31, 1883.

Egan, P. R., first lieutenant and assistant surgeon. Upon reporting of relief to proceed without delay from Fort Huachuca, A. T., to Fort Apache, A. T., and report to the commanding officer for duty at that post. S. O. 119, Department of Arizona, December 27, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE TWO WEEKS ENDING JANUARY 12, 1884.

Hudson, A., medical inspector, from duty as assistant to the Bureau of Medicine and Surgery, on the 18th inst., to the U. S. S. Lancaster, as the relief of Medical Inspector N. L. Bates, who is to be detached and ordered home.

Russell, A. C. H., passed assistant surgeon. From the Navy Yard, Washington, to hold himself in readiness for sea service.

McMurtrie, D., surgeon. Ordered to the Naval Rendezvous, Philadelphia, Penn.

Price, A. F., surgeon. Detached from the Receiving Ship St. Louis on the 15th, and ordered to the U. S. S. Ossipee on the 22d.

Russell, A. C. H., passed assistant surgeon. Ordered to the U. S. S. Ossipee on the 22d.

Eckstein, H. C., passed assistant surgeon. Detached from the Naval Hospital, Philadelphia, and ordered to the Receiving Ship St. Louis.

Wells, Howard, passed assistant surgeon. From the Naval Rendezvous, Philadelphia, and ordered to the Naval Hospital, Philadelphia.

Books and Pamphlets Received. — Contributions of the Old Residents' Historical Association, Lowell, Mass., organized December 21, 1868. Vol. II. No. 4. Published by the Association. Containing Reminiscences of the Early Physicians of Lowell and Vicinity. By D. N. Patterson, M. D. Also Members of the Massachusetts Medical Society in Lowell from 1822 to 1883. By John O. Green.

Random Notes and Observations of a Trip through the Great Northwest, including a Few Words about the Yellowstone National Park. By Dr. Edmund C. Wendt. (Reprint.)

Bacteria. By Dr. Antoine Magnin, Laureate of the Faculty of Medicine of Paris, etc., and George M. Sternberg, F. R. M. S., Major and Surgeon, U. S. A., etc. New York: William Wood & Co. 1884.

Cholera. A Disease of the Nervous System. By John Chapman, M. D., M. R. C. P., M. R. C. S. London: J. and A. Churchill, 1883.

Third Annual Report of the State Board of Health of New York. Albany. 1883.

Medical Thoughts of Shakspere. Compiled by B. Rush Field, M. D., Easton, Pa. 1884.

Original Articles.

NEPHRECTOMY FOR THE REMOVAL OF CANCEROUS OR SARCOMATOUS TUMORS OF THE KIDNEY.

BY JOHN HOMANS, M. D.,
Surgeon Massachusetts General Hospital.

In the table of cases given below will be found only those where an operation was undertaken to remove a *sarcomatous* or *cancerous* kidney, or where the operation being undertaken on a different diagnosis eventuated in a nephrectomy for sarcoma or carcinoma. I have purposely excluded all cases of removal of the kidney for cystic disease, for floating kidney, for suppuration of the kidney filled with calcareous masses, or for any purpose other than that of removing a kidney affected with one of the two kinds of tumor mentioned above. At my request Dr. Howard Lombard has looked over the literature of the subject, and has found twenty-five cases of the kind mentioned above. If we add to these my own case, to be described later, we have twenty-six cases in the accompanying table.

Dr. Lombard finds upwards of 130 reported cases of nephrectomy, and out of this number the operation has been done twenty-five times (with mine twenty-six times) for malignant disease, namely, for sarcoma twelve times, for carcinoma six times, for encephaloid four times, for adenoma once, and for doubtful tumors three times. In these twenty-six cases there have been eight recoveries, seventeen deaths, and one patient was under treatment at the time the case was reported. The causes of death were as follows: primary hæmorrhage, two; collapse, two; peritonitis, five; septic peritonitis, two; shock, two; pulmonary embolism, septicæmia, return of disease, and cause unknown, one each.

The incision was made in the lumbar region in seven cases, of which four recovered, two died, and one was under treatment when reported. In nineteen cases the incision was ventral, and fifteen died. The operation we have found reported fourteen times in Germany, six times in England, five times in the United States, and once in France.

My own case, in which the fatal result is to be attributed more or less to want of skill, occurred in a man, twenty-nine years old, single, a sailor by occupation. He dated his abdominal trouble from the time he lifted a heavy stone, two years or more before.

History when first seen. He discovered the tumor fifteen months ago, in the left hypochondrium. He has been growing thin, and has not worked any since the pain in his back began, two years ago, at which time he first noticed blood in his urine; this has appeared from time to time irregularly; sometimes his urethra has been plugged with clots so that he has drawn them out in long masses, and once as the plugs of coagulum could not be drawn out he was catheterized. He has more pain when his urine begins to be bloody. The pain in his back is what prevents him from working; when he jumps, or stumbles, or stubs his foot his back aches. He sleeps fairly well; his appetite is variable; his strength is failing. The tumor is a hard, flattened, oval mass, extending from the splenic region to the iliac region on the left side. It is about four and one half by nine inches in its diameters, and feels at first as if it were an hypertrophied spleen. At the same time it projects downwards into the anatomical site of the left kidney as well as upwards under the ribs. It is moved freely during respiration, and falls over towards the right side a little when the patient turns on his right side. It is uncertain whether it is within the peritonæum or whether it has pushed the peritonæum before it. About one third of the tumor lies under the ribs in the left hypochondriac and thoracic region. Dr. E. G. Cutler examined the blood, and found no increase in the number of white corpuscles, and no more albumen in the bloody urine than the blood would account for; no pus and no diminution in the amount of urea; he did find, however, blood casts from the tubules, from the ureter, and, perhaps, from the urethra. I found no stone in the bladder to account for the hæmorrhage.

I reasoned somewhat in this way: If the tumor is an enlarged spleen it causes hæmorrhage by pressure on the renal vessels, or else the renal hæmorrhage is like the nose-bleed that accompanies an enlargement of the spleen. If the hæmorrhage were caused by a calculus in the kidney there would be pus in the urine, and the urine would decompose. The tumor fills the left lumbar region, and *seems* to have grown from the lumbar rather than from the hypochondriac region. I was inclined to think the tumor one of the kidney, and very probably malignant. The man had come from a distance to have the tumor removed, and his decision was unchanged when the nature and possible result of the operation was explained to him. After delaying several weeks that the case might be thoroughly considered, and after consultations with competent advisers, an operation was decided upon, and was done at St. Margaret's Home on November 24, 1883.

Operation one hour's duration; performed antiseptically under a spray of carbolic acid. An incision about five inches long was made through the linea semilunaris. After the peritonæum was opened it was seen that the descending colon had been pushed forward, and that an incision about half an inch long had been made in one wall. A director had been used, and the abdomen had been opened as carefully as usual. Probably it was owing to the thinness and great flattening of the colon squeezed between the tumor and the anterior abdominal wall that the wound was made. This cut was sewn up with a continuous suture of carbolized silk, and the operation was proceeded with. The incision was extended downwards near to the anterior-superior spine of the ilium and upwards through the cartilage of a rib. Another incision, about three and a half inches long, was made backwards at a right angle to the first incision. The tumor could now be seen gliding upwards and downwards beneath the peritonæum as the respiratory movements took place. The posterior wall of the peritonæum was now cut through, and an attempt made to peel out the lower extremity of the tumor, and raise it from its bed. This was accomplished with some slight hæmorrhage from the peritonæum near the hilus of the kidney. The upper end of the tumor was now sought for, and pulled up very much as one would at an autopsy. The strain on the renal vein at this time was very great. When the tumor had been raised up at both ends the fold of peritonæum enveloping it was pushed back more or less, and the ureter and renal vessels were clamped in a large Spencer Wells's clamp. The pedicle was then tied with carbolized silk, and the clamp removed while the ligature was being tightened.

Operator and Original Record.	Sex and Age.	Diagnosis or Aim of Operation.	Evil dates Back.	Date of Operation.	Seat of Incision.	Form of Dressing.	Treatment of Pedicle.	Symptoms after Operation.	Result, Immediate and Eventual.	Hæmorrhage at or after Operation.	Condition of Organ Removed.	Remarks.
1. Walcott (America). Med. and Surg. Reporter, Phil., 1861, vol. vii.	M. 58	Diag., cyst of liver.	Six years.	1861, June 4.	Ventral.	—	—	—	Death fifteen days after, from exhaustion of suppuration.	—	Encephaloid of right kidney. Weight, two and a half pounds.	—
2. Peaslee (New York). Ovarian Tumors.	F. —	Diag., ovarian growth.	—	1868, April.	Median Abdominal.	—	—	Free evacuation of urine.	Death fifty hours after of peritonitis.	—	Solid renal tumor.	—
3. Langenbuch (Germany). Berlin. klin. Wochenschr., No. 24, 1877.	F. 32	Diag., sarcoma of lumbar muscles or of kidney.	Eighteen months.	1875, December 7.	Lumbar.	Antiseptic.	Ligature difficult; slipped off.	None bad. No fever.	Recovery. Left hospital January, 1876.	Slight when ligature slipped.	Doubtful. A hollow organ.	There is some doubt as to nature of diseased mass, specimen having been thrown away by inadvertence of servant.
4. Koehler (Bern). Deutsch. Zeitschr. f. Chir., Bd. ix., 1878.	F. 35	Sarcoma of a freely movable kidney.	Eighteen months.	1876, April 20.	Ventral, high.	Antiseptic failed.	Not reached.	Only thing remarkable was cystitis second day.	Death third day, from peritonitis.	None noted.	Sarcoma. Extensive.	Operation abandoned, the growth spreading too far into transverse mesocolon to be separable. Abdominal incision stitched up.
5. C. Hüter bei Schüller (Greifswald). Deutsch. Zeitschr. f. Chir., Bd. ix., p. 572.	F. 4	Diag splenic or ovarian growth.	One year.	1876, July 4.	Linea alba.	Strictly antiseptic.	Not reached.	—	Death during operation from hæmorrhage from renal vessels.	Furious at.	Right kidney atrophied, with attached parenephritic sarcoma.	Tumor weighed nearly five pounds. Twenty-two cm. by fourteen by 11.6. Commenced at hilus and spread into kidney.
6. Jessop (Leeds). London Lancet, 1877, vol. i.	M. 2½	Renal encephaloid.	One year.	1877, January 7.	Lumbar.	Not antiseptic.	Lig.; whip cord.	None bad. No vomiting. Good flow of urine.	Recovery. Child up and running about soon after.	—	—	Eight months later recurrence was evidently taking place, probably in lumbar glands. Child died a few weeks later at its home. No autopsy.
7. Koehler (Bern). Deutsch. Zeitschr. f. Chir., Bd. ix., 1878.	M 2½	Renal new growth.	2½ years	1877, Sept. 27.	Ventral.	Antiseptic.	Lig.; double catgut.	No uræmia; no vomiting; free flow of urine soon after.	Death third day, of septic peritonitis.	Considerable during. None from pedicle.	Adeno-sarcoma. Three pounds, fifteen by sixteen by ten cm.	—
8. Byford (America). Trans. Amer. Gynæcolog. Society, 1880, p. 71.	F. 39	Encephaloid of right kidney.	Eighteen months.	1878, March 14.	Linea alba, 7 inches.	Strictly Listerian.	Lig. in three parts, with silk cut short.	None of note.	Recovery rapid and complete.	None.	Four and a half pounds. Encephaloid throughout.	Patient last seen in July, 1880, in perfect health.
9. Martin (Berlin). Berlin. Klin. Wochenschr., 1879, No. 22.	F. 53	Sarcoma of kidney.	Two months.	1878, December 9.	Ventral.	Strictly antiseptic.	Ligature; nine silk.	—	Recovery complete. Out of bed eighth day; went home seventeenth.	None.	Malignant new growth. Weight twenty-eight ounces. Microscope showed to be sarcoma.	Operation lasted 45 minutes. Rendered particularly difficult by presence of large, engorged veins running over the tumor.
10. Czerny (Heidelberg). Centralblatt f. Chirurgie, No. 45, 1879.	M. 50	Malignant tumor of kidney.	Two years.	1879, January 19.	Ventral.	—	Not reached.	Death ten hours after, of shock.	Hæmorrhage profuse at operation; from renal artery.	Soft, spongy mass left in situ. Medullary sarcoma.	—	Having broken into soft mass of tumor during operation, profuse bleeding set in from renal artery. Aorta then ligatured.
11. Lorsen (Heidelberg). Deutsch Zeitschr. f. Chir. Bd. xiii., Heft 3, 4, 1880.	F. 37 years. Six mos. advanc. in 9th pregnancy.	Diag., tumor of right ovary. No true urinary symptoms.	One year.	1879, August 11.	Linea alba.	Antiseptic carbolic spray.	Ligature of ureter first; later pedicle, with No. 2 silk, not by transfixion.	Shock from loss of blood and from carbolic intoxication. Abortion twelve hours after operation. Endometritis sixth day.	Recovery perfect. Returned home September 25th. Amount of urine rose to normal in nine days. At first was one half normal quantity.	Very severe at, from pedicle on slipping of ligature when kidney was cut away.	Quite healthy angio-sarcoma, five to six times size of kidney. Grew from surface of latter.	Most remarkable case. The only bad symptoms were clearly due to endometritis and carbolic intoxication. Still reports herself well in June, 1881.

12. Bardenhauer (Cologne). Die Drainirung der Peritoneal-höhle, Stuttgart, 1881, s. 257.	F. 22	Diag., perinephritic abscess, following renal calculus or tumor.	Since June, 1879.	1879, Nov. 23.	Lumbar.	—	Ligature en masse.	Profound collapse. Considerable fever.	Death December 3d, presumably from sepsis, which existed before operation.	Profuse from cavity of abscess.	Spindle-cell sarcoma, size of hen's egg.	—
13. Barker (London). Trans. Medico-Chir. Society, vol. lxiii., 1880.	F. 21	Encephaloid of right kidney.	Eight mos.	1879, Dec. 23.	Linea alba.	Strictly Listerian. Antiseptic.	Transfixed and tied twice, vessels separately after. Silk cut short.	No shock, but vomiting continued to last. Senses clear throughout.	Death forty-five hours later, from pulmonary thrombosis.	None during or after. Operation practically bloodless.	Two thirds of organ converted into a mass of encephaloid. Weight 30½ ounces; 7 by 4½ by 4½ inches.	Whole operation passed off without difficulty.
14. Czerny (Heidelberg). Archiv. f. Clin. Chir., Bd. xxv., Heft 4, s. 858.	M. 23 Phthisis.	Diag., hydronephrosis of left kidney. Tapped in 1880 in front of axillary line.	Probably congenital. Painful. Three years. Had burst three times.	1880, March 9. Lasted three hours.	From old fistula in front of axillary line, parallel to Poupart's ligament. Later prolonged up to twelfth rib.	Lister throughout, with drainage tubes.	Ureter tied; also artery and vein; later, twelve other vessels.	Death half an hour after, from shock, chill, and carbolic intoxication.	—	Hardly any after.	Hydronephrotic, and full of masses of large round-cell sarcoma.	Post mortem revealed glandular infiltration, tubercular deposits in liver, spleen, kidney and lungs. Old pleuritis and pericarditis.
15. Czerny (Heidelberg). Deut. med. Wochenschrift, 1881.	F. 11 mos.	Tumor of left kidney.	Six weeks.	1880, August 2.	Abdominal median.	Antiseptic.	Six silk ligatures.	Considerable vomiting and diarrhœa.	Death three days after, of septic peritonitis.	Slight.	Adenoma larger than the head.	From danger of carbolic poisoning carbol. acid had to be used very sparingly. Child quite weak bef. op.
16. Lücke (Germany). Deut. Zeitschr., Bd. xv., Heft 5 and 6, s. 1881.	M 60	Sarcoma of kidney (right).	—	1880, August 6	Abdominal.	Antiseptic.	Double silk ligatures.	—	Death ninth day, of peritonitis.	Extreme venous from renal vein. Vena cava also ruptured.	Carcinoma, 21 by 11.5 by 9 cm.	—
17. Bardenhauer (Cologne). Harris' Table in American Journal Medical Science, 1882.	M. 26	—	—	1881.	Lumbar.	—	—	—	Recovery?	—	Sarcoma of kidney.	—
18. Czerny (Heidelberg). Deutsch. Med. Wochenschrift, 1881.	M. 51	Tumor of left kidney.	More than one year.	1881, April 23.	Lumbar (transverse).	Antiseptic.	Ten silk ligatures.	Because of vomiting from use of carbolic, a dressing of thymol was applied on third day.	Recovery without fever. Moderate suppuration.	Moderate at.	Angio-sarcoma, size of head, involving inferior end of left kidney.	—
19. Czerny (Heidelberg) Not yet published. [Vide Table in Trans Internat. Med. Congress, London, 1881, vol. ii., p. 260.]	M. 40	Sarcoma of left kidney, with hæmorrhage.	Six months.	1881, July 25.	Lumbar (transverse).	Antiseptic.	Ligature en masse passed several times.	Urine clears up. Fever moderate. No uræmia.	Under treatment August 9, 1881.	Considerable at, from rupture of capsule and tumor.	Sarcoma of lower half of left kidney, size of child's head.	For several months there had been "gravel" in the urine. Tumor filled all of left lumbar reg. Besides hæmorrhage there had been insufferable pain.
20. Whitehead (England). British Med. Jour., February, 1881, page 741.	M. 46	Malignant tumor of kidney.	Six months.	1881, Sept. 5.	Linea alba.	Antiseptic.	Silk ligatures.	Localized peritonitis day after operation.	Death on fourth day, suddenly. From unknown cause.	Considerable.	Weight 1 pound 4 ounces. Six by four inches. Nature of growth not reported.	Application of lig. very difficult because of extreme shortness of pedicle.
21. Hicquet (Liège). Bull. Acad. Med. Belgique, 1882.	F. 6	Sarcoma of left kidney.	—	1881, Sept. 10.	Abdominal.	—	—	—	Recovery complete in two weeks.	—	Sarcoma.	—
22. J. E. Adams (England) London Lancet, vol. ii., 1882, p. 943.	M. 39	Tumor of right kidney.	Hæmaturia two years.	1882, March 10.	Lumbar.	—	Ligature en masse, with whip cord.	Wound healed in a few weeks. Hæmaturia ceased at	Death forty-four days after operation, with effusion into both pleural cavities. Plugging of left renal vein. Numerous secondary de-	—	Carcinoma. Organ twice normal size.	

Operator and Original Record.	Sex and Age.	Diagnosis and Nature of Operation.	Evil dates Back.	Date of Operation.	Seat of Incision.	Form of Dressing.	Treatment of Pedicle.	Symptoms after Operation.	Result, Immediate and Eventual.	Hæmorrhage at or after Operation.	Condition of Organ Removed.	Remarks.
23. Rawdon (England). Liv. Med.-Chir. Journal, July, 1883.	F. 16 mos.	Tumor of left kidney.	Three months.	1882, September 2.	Linea alba.	Antiseptic spray.	Carbolized silk ligatures.	once, but patient gained no strength.	posits in lumbar glands and on ribs. Death from collapse fifteen hours after operation.	About one ounce during. None after.	Carcinoma. Interior contained several cysts. Weight 1lb 5 ounces.	Death may have been due to commencing septicæmia, after-treatment (carbolic spray) dressing.
24. Sir Spencer Wells (England). London Lancet, January, 1883, page 961.	M. 58	Cancer of right kidney.	—	1882, December.	Ventral.	—	—	—	Death in five days.	—	Soft cancer, six by four inches.	—
25. S. W. Gross (America). Philadelphia Med. News, June 9, 1883.	F. 59	Ovarian or renal tumor	Three months.	1883, April 20.	Linea alba.	Antiseptic spray.	Transfixed Double ligature with carbolized silk.	—	Death sixty-five hours after operation, from peritonitis complicated by suppression of urine.	Furious at, from renal artery.	Carcinoma. Weight eighteen ounces. Large circumference 15½, small 10½ inches.	Operation lasted fifty-five minutes.
26. John Homans (Boston, U. S. A.). Boston Med. and Surg. Journal, January 24, 1884.	M. 29	Renal tumor.	Two years.	1883, Nov. 24.	Linea semilunaris.	Antiseptic spray.	Transfixed. Tied with Tait's knot carbonized silk.	Suppression of urine. Patient very quiet and calm, almost dull.	Death fifty-one hours after operation. Acute general peritonitis.	None.	Carcinoma of the left kidney. Three and a half pounds.	At the autopsy there was found acute general peritonitis, infiltration of kidneys. Fatty infiltration of liver, with cloudy swelling, edema, and thrombosis of veins; blood in lungs, and wound of intestine.

The substance of the kidney was then cut through on a level with the pelvis. Warm sponges were put in the place formerly occupied by the tumor, and the rest of the peritoneal cavity was examined for clots. A large India-rubber drainage tube was passed out through the loin, an incision having been made for the purpose. The anterior and lateral incisions were then sewed up after the abdominal cavity had been thoroughly cleaned, and the wounds were dressed antiseptically. An enema of a drachm of laudanum and an ounce of brandy was given, and the patient was removed to his bed with a good strong pulse.

During the next twenty-four hours his temperature was about 100° F. *Only four ounces* of urine were secreted. He had no vomiting until ten A. M. of the day following the operation. During the last twenty-seven hours of his life fifteen drachms of urine were drawn off, so that during the fifty-one hours that he lived after the operation he passed but five ounces seven drachms of urine. He sank away, and died rather suddenly and quietly without having suffered much. He vomited more or less, and was very quiet, in fact rather dull. The urine was dark-colored, thick, and intensely acid. If the suppression of the urine was due to carbolic acid the temperature ought to have been below normal rather than above. It would have been wiser, however, to have used some other reagent or else to have omitted the spray altogether.

The following is Dr. Whitney's account of the autopsy: —

Autopsy twenty-four hours after death.

Rigor mortis present.

Body warm. A fifteen to twenty centimetres long wound in the abdominal wall, to the left of median line, closed by an interrupted suture.

An opening in the left lumbar region, from which a drainage pipe projected.

Head not opened.

Pericardium contained about thirty cubic centimetres of serous fluid.

Right lung bound to chest wall by moderately firm old adhesions. Left lung free. Lungs did not fully collapse upon removal from the chest. Upon section a thin fluid mixed with air issued from the dark-red surface.

Heart normal in size. Muscular substance markedly decomposed.

The coils of the intestine were joined by soft, purulent, flaky masses, and the surface was covered by a thin layer of purulent lymph. A little purulent and bloody fluid was in the pelvis.

Just below the splenic flexure of the colon was an opening into the bowel, which had been drawn together by a continuous suture.

In the place of the left kidney was a ragged opening through the peritonæum, which, as well as the deep muscles, was infiltrated with blood. A number of thrombosed veins were found.

No enlarged glands were noticed in the mesentery or neighborhood.

The right kidney was about normal in size. The superficial veins injected. Upon section it was found to be whitish, opaque, and marked by an occasional yellow line. Microscopic examination showed the presence of fat in many of the tubules.

The liver was opaque. The periphery of the acini yellow, the centres red. Microscope showed moderate fatty infiltration with a granular degeneration of cells.

The other organs presented no unusual appearances.

Diagnosis. Acute general peritonitis. Fatty degeneration of kidney. Fatty infiltration of liver with cloudy swelling. Œdema and hypostatic congestion of lungs. Wound of intestine.

A section through the tumor showed a coarsely reticulated structure of alternating fibrous bands, between which were opaque, yellowish, friable masses.

The microscopic examination showed that these last were composed of large epithelial cells, arranged in columns, and lying in small alveolar spaces. No true kidney tissue was found.

Diagnosis. Cancer of kidney.

CASES OF MELANCHOLIA.[1]

BY GEORGE T. TUTTLE, M. D.

I AT first intended this paper to be a report of a case of melancholia with delusions, false sight, and false hearing that recovered while under the opium treatment, but its scope has been somewhat enlarged, and it is my purpose to briefly report or allude to several cases of melancholia where the medical treatment was opium, or a mixture of cannabis Indica and bromide of potassium or sodium.

It is well known that the presence of false sight and hearing for any length of time in a case of melancholia, indeed in any form of mental disease, warrants an unfavorable prognosis. The case I shall first report was of this character, and the chance of recovery was thought to be small.

E. C. H. was admitted to the McLean Asylum May 7, 1882; a man thirty-eight years of age; married; a merchant. No insanity in the family. He had usually been well except for occasional attacks of facial neuralgia that occurred at irregular intervals, of a few days or weeks, and lasted from half a day to two days. He was always of a nervous temperament, worried over little things. For a while he had been in charge of a branch house in another city, and had worked very hard; it is not possible to give any other as the exciting cause of his illness.

About the first of January (four months before admission) he began to appear nervous and irritable, and was unable to sleep well. He soon showed less capacity for business; then he had the idea that he had lost his place in the firm, and that his wife and children would suffer.

About the first of March he went to his home in an adjoining town, as he was totally unfit for work. He had grown worse. From worrying about business affairs he had taken another step and thought he had committed the unpardonable sin. Two weeks before admission he bought laudanum with the intention of suicide. On the morning of admission he was found with a rope and stone attached going towards a cistern, evidently intending to drown himself. Because of these attempts at suicide he was brought to the asylum. He was by no means demented, though the physician's certificate, under which he was committed, read, "A species of dementia, fatuity."

A physical examination revealed nothing abnormal. He showed much agitation and loss of self control, walking the floor, wringing his hands, and muttering. He answered questions readily, but repeated his answers several times as though in great distress and scarcely realizing what he was doing. He was given cannabis Indica, in the form of the tincture, one grain, and potassium bromide twenty grains, three times a day.

This agitation continued for several days, attended with loss of sleep, but he soon appeared in a way able to listen to reason, and it was almost possible to convince him that his ideas were wrong. On the 15th (eight days after admission) his wife, whom he left at home sick, and of whose recovery he had no hope, made him a call. This was of great benefit.

Under the cannabis and bromide, with plenty of food, rest, fresh air, and what diversion could be afforded, he improved rapidly, and began to read and take an interest in affairs. By the 23d of June he appeared so well that he was on that date allowed to spend the day at home, with a favorable result. The cannabis Indica and bromide had been gradually reduced till by this time he was taking only one fourth grain of the former and five grains of the latter.

At a subsequent visit, however, about the 6th or 7th of July, he became disturbed, and was not so well after returning to the asylum. Three days later he became much agitated, trembling because of fear; was afraid of those about him. The cannabis and bromide was resumed in full doses (one grain cannabis, twenty grains bromide).

At this time he revealed the delusion that there were various articles in the papers referring to him, and that people talked about him. This did not appear to have been false hearing. He had simply overheard the conversation of his associates and made what they said apply to himself, just as he did what he read in the papers.

About this time he did have unmistakable false hearing and illusions of sight.

He heard his father-in-law talk to him in the night, and the capitals of several Corinthian pillars which, on another building, he could see from his window, appeared to him to be grinning faces. When fully under the influence of the cannabis and bromide he became quite calm, though his depression was considerable and attended with the usual delusions of great wickedness and terrible punishment. He often said that while he was perfectly certain this was so, it was a wonder to him that he could go in the garden, smoke his cigar, and talk composedly with people. During the summer many things foretold his approaching doom: the reflection of the setting sun from the windows of the city was to him ominous; the locomotive bells tolled instead of ringing as they used to do; even the flowers in the garden reviled him.

In the fall he grew worse. He frequently heard the voice of his wife, which appeared to come from the sky, and often saw in his path a skull and crossbones which foretold his fate. He used to try to point this out to others, but no stretch of the imagination could detect any resemblance, for he usually saw some figure on the carpet or spot on the gravel walk.

As he did not appear to be gaining, and the cannabis and bromide merely kept him from a state of extreme agitation, and more especially as he began to complain that his gait was unsteady and that he had some difficulty in directing the movements of his hands, it was gradually changed during the latter part of November to deodorized tincture of opium, of which he

[1] Read before the Boston Society for Medical Observation, December 3, 1883.

took twenty to twenty-five minims three times a day during December and January.

There was, however, no improvement in his mental condition. False sight and hearing continued; shadows on the curtains were to him living faces; the paper in his room had been selected with special reference to him, and the design represented many knives, which were a constant threat of death; and he at last had the idea that he was to be taken to Mount Auburn and buried alive or left in a tomb to starve.

He grew worse also in his physical condition; his appetite failed, and there was marked loss of flesh and strength, but it was decided notwithstanding to push the treatment more vigorously, and the 1st of February the deodorized tincture was changed to sulphate of morphia, and the dose rapidly increased from five eighths to three fourths of a grain, which he took from February to September, as it was enough to completely control his restlessness.

Under the larger doses of morphia his appetite improved and he slept better, without the moderate dose of chloral and bromide which he had sometimes taken, and the attacks of facial neuralgia became much less frequent.

He gradually dropped his ideas of wickedness and torture; there was no evidence of false hearing, and by the early summer he had begun to read the papers and books.

June 23d he went home for the day. After making several visits of a day, he stayed over one night; then a longer time. During these visits he appeared very happy, playing with his children, meeting his friends in a natural way, and took sufficient interest in his business and other affairs to occupy his attention. On the 19th of September he went away on a visit, not to return unless necessary. He had by this time given up all idea of having done wrong, and was only anxious to get back to his business and family.

He has since been seen and heard from several times, and the reports have always been favorable. He was discharged recovered after twenty months' illness.

Another case closely resembling this in its essential features was that of a woman (L. H.) forty-nine years of age, who was admitted July 22, 1882. Father and mother both committed suicide. She was one of nine children, none of whom except herself had been insane. Had had two previous attacks of melancholia, the first in 1853, the second in 1869. Present attack of six weeks' duration caused by anxiety and loss of sleep incident to the care of a sick relative.

The growth of her delusions was in this wise: Exhausted by watching, and over anxious, she at first feared she had not done her duty; then thought she *had* not; then that she was a sinner; then that the deaths in the family were a judgment upon her; and finally, that she was a murderess. She was suicidal.

In a general way the treatment till December was occasional doses of sedative medicines at night, and special attention to diet and the general conditions of health. But she grew worse; was apparently in the depths of despair; constantly moving about, talking, and showing great restlessness and agitation, which at times amounted almost to incoherence.

In a month from the time of admission she had the most marked false hearing. People made various accusations against her; she could hear vulgar talk and laughter and remarks against her character. In another month (by the middle of September) she was still worse; thought she was an animal, and that repairs in process on an adjoining building were to construct her a pen. Appetite was pretty good, but she thought she ought not to eat because of her crimes. In consequence of this she would beg, cry, and struggle in a distressing and noisy way when the nurses attempted to give her food.

December 1st she was given deodorized tincture of opium, ten minims three times a day regularly, and by the 14th it had been increased to twenty minims. At this time she was in a more comfortable state of mind, sleeping well without sedatives at night, eating without trouble, and could occupy herself a part of the time with needle-work or some household duty.

During the latter part of January she was not as well for a time, but after an increase of the opium, February 1st, to thirty minims, she regained her balance, and continued to improve till the latter part of March, when, for a week or two, she was much more anxious and restless; but this gradually passed off, and by the 28th of June she was allowed to go home on trial, after a hospital residence of eleven months, and seven months after the beginning of the opium treatment. She now seems to be well.

Another case of the apparently successful use of opium was that of a man (H. W.) sixty-one years of age, a merchant, who was admitted January 15, 1883. First attack of a few weeks' duration. Exciting cause, failure in business. His mother and sister had been insane. He was of a nervous temperament, but usually well.

After his failure he appeared much depressed in mind, and soon restless, going without apparent object from place to place, showing a want of self-control by his conversation as well as actions, and, as he was found to be carrying a revolver and a razor, his friends thought it safer for him to come to the asylum, though he had made no attempt at suicide.

For a few days after entrance his restlessness and agitation were considerable. He would walk the floor with his hands to his head, saying, "Oh, dear! what have I done? what have I done?" While taking deodorized tincture of opium in the moderate dose of twenty minims three times a day, he regained his self-control, though his depression was not then the less. With careful attention to his general health he rapidly improved, and March 31st he went home in a very comfortable condition, after a hospital residence of two and one half months. As subsequent reports were favorable he was discharged, recovered.

The opium treatment has been given in six other cases of melancholia, to which I will briefly allude.

A man (D. W. F.), fifty-three years of age, had been depressed in mind for six months, and for two months had had delusions about his business affairs; that his family was coming to want, and, as they would freeze or starve, had better die at once. Was suicidal; no false sight or hearing.

For nine months he took ten to twenty minims of the deodorized tincture three times a day. Under the latter dose he became calmer, slept better, ate better, and gained in flesh and strength. He is now at home and well enough to be making plans for engaging in business.

A man (R. S. M.), sixty years of age, had been suffering from melancholia for six months previous to admission. His intelligence was good, but he lacked will-power, and after he finally came to a decision on

any question worried for fear he had made a mistake. He could not sit and read or talk, but walked the floor till tired enough to lie down, and when partially rested began his walk again. Slept poorly. He took twenty minims deodorized tincture three times a day for five months, and was then nearly as restless as at the beginning of the treatment, and his mental condition was not much improved. I must in fairness say, however, that he had gained a few pounds in weight, and that the opium at least did him no harm, and he held the slight improvement after stopping the treatment.

Another man (J. B. J.), fifty-two years of age, with delusions, false sight and hearing, a case of nine months' duration, in which no sort of treatment could have been applied with much hope of success, was given in a mild way meconate of morphia (one eighth to one fourth of a grain three times a day), for two months, during which time he steadily grew worse. The man is now no better, after an illness of three years.

A woman (T.), fifty-six years of age, second attack, of seven weeks' duration, was in great distress of mind, fearful of coming destruction, in constant motion, moaning and crying, at times beating her head against the wall and trying to choke herself with her hands. No evidence of false sight or hearing. She was given one fourth of a grain of meconate of morphia at bedtime for a month, and one sixth to one fourth of a grain three times a day for six weeks, but did not improve. A criticism applicable to this and the preceding case is that the dose was not large enough nor long enough continued.

Two women are now under treatment. Both are cases that one might expect to benefit with opium, as they show great agitation and distress of mind, walking the floor, crying and wringing their hands; insomnia and anorexia. One is now taking one grain of morphia sulphate three times a day, and the treatment has been pursued between two and three months, the dose having been gradually increased to the present amount. There is as yet little improvement.

The other case is complicated with false hearing and possibly sight. The treatment has been pursued nearly two months. She is now taking one and one quarter grains of morphia sulphate three times a day, and is no better.

Not considering the two cases now under treatment, of the seven cases reported three recovered; one was much improved; one was improved in a slight degree, and two grew worse. (In these two cases the treatment was not satisfactory, the dose was too small.)

It will be remembered that in the case first mentioned the treatment at the beginning was a mixture of cannabis Indica and bromide of potash, in the proportion of one grain of the cannabis to twenty grains of the bromide, as recommended by Dr. Clouston in his essay on Opium, Potassium Bromide, and Cannabis Indica.[1] It has been quite largely used at McLean Asylum, more particularly and with greater success in cases of maniacal excitement; but it has also been tried in a number of cases of melancholia, in several with benefit, and in one with marked success. This was the case of a man (W. F.), thirty-nine years of age, an architect, who was admitted January 28, 1882. A former attack of melancholia in 1864 lasted one year. Present attack, of six months' duration, was apparently caused by the death of his wife. He had the usual ideas of a man suffering from melancholia, and was suicidal. He showed considerable restlessness and agitation, not extreme, to be sure, but he could not confine his attention to anything, and walked about aimlessly.

He was given three fourths of a grain of cannabis and fifteen grains of bromide three times a day (A. M., P. M., and before sleeping), which was increased July 4th to one grain cannabis and twenty grains bromide. He became more composed, and could take his part in a conversation to the amusement and instruction of others, for he was a very well-informed man, but would not admit that his depression of mind was less. By July 21st he was busy with his pencil and brush. With the usual care in regulating his daily life, he continued to do well, gaining in flesh and spirits, and the medicine was gradually reduced during September and October till he took one fourth grain cannabis and five grains bromide. He gradually grew worse; his old restlessness and depression returned in some degree; he looked haggard and was evidently losing flesh. November 4th the cannabis was increased to three fourths of a grain and the bromide to fifteen grains three times a day. He soon appeared better, and on the 18th it was reduced to one half grain cannabis and ten grains bromide.

From this time his progress was steady, and he left the asylum January 27, 1883, after a hospital residence of seven months. He was discharged recovered.

Another case was a woman (A. M.), fifty-five years of age. Of four sisters who had been insane one was at the time of admission an inmate of the McLean Asylum; one sister and a brother had committed suicide.

She was inclined to talk much of religion, her wickedness, and the certainty of a terrible punishment. She had delusions, such as that the nerves of her head were dead, broken, and dried up; that her feet and bowels were burning; that she was dying, and others of a like distressing nature. She was determined to commit suicide, and while undressing would often secrete a stocking, a garter, or a towel in the bed, and would shortly be found with it about her neck. Was often fed with the tube. She would be fed for several days or weeks, and then would eat for awhile, and again require feeding. She was very restless and constantly asking questions, frequently repeating the same one, more, apparently, from distress of mind than because of lack of comprehension. Her favorite remark was, "I've done wrong." It appeared to be a hopeless case so far as recovery was concerned, but for her comfort, November 1, 1880, the treatment by cannabis Indica and bromide of potassium was begun, and for four and a half months she took from one to one and a half grains of cannabis and twenty to thirty grains of bromide twice daily, as it appeared in a measure to quiet her.

During the month of December it was for a time omitted. She became more excited and deluded. Perhaps it could not fairly be claimed that her appetite improved under this treatment, but it is a fact that while taking the cannabis and bromide she was not once fed with the tube. She became so much more quiet that she was moved to a better ward. She was still much depressed, and both during this time and on many occasions afterwards attempted suicide. So far as recovery was concerned the use of cannabis and bromide was a failure. She was afterwards given opium in a mild way, the dose was too small to do any good, and she was finally transferred to a State Asylum, not improved.

[1] Brit. and For. Medico-Chir. Rev., Oct., 1870, and Jan., 1871.

Not to weary your patience, I will simply say that of seven other cases treated with cannabis and bromide, one woman in a state of great agitation, constant distress of mind, and extreme suicidal impulse, took from three fourths grain to one grain cannabis and fifteen to twenty grains bromide three times a day for three months with marked benefit. It was then thought best, from her appearance, to omit it for a while, and opium in moderate doses was substituted. This did not succeed. There was loss of appetite, in fact pretty constant nausea, with, of course, loss of flesh, and a change for the worse in mental condition. Cannabis and bromide were afterward resumed with the former good effect, and are still taken.

Another case, still an inmate of the asylum, thought she had committed the unpardonable sin; was fearful of future punishment, greatly agitated, and made foolish attempts at suicide. For four months she took one and one half grains cannabis and thirty grains bromide three times a day, and later one and one fourth grains cannabis and twenty-five grains bromide three times a day for two months, apparently with great benefit. Of two other women, one was discharged recovered, but not while taking the cannabis and bromide, nor because of it; and the other is not improved after having taken for two months one to one and one fourth grains cannabis and twenty to twenty-five grains bromide. One man left the asylum at the end of a month not improved, but this was not a fair trial either in time or dose. In the case of another man it was omitted after four months' trial, and opium substituted, with good results. A third man took it with doubtful benefit for four months.

Not considering the case still under treatment, of the above eight cases one recovered; the cannabis and bromide was of marked benefit in two cases; of doubtful benefit in two; and of no advantage in three (one not having been a fair trial).

The action of this combination seemed to have been mainly sedative, and the effect was to quiet restlessness and give general treatment a fair chance; indeed, if the patient merely becomes calm it is in itself a long step towards recovery. It is perhaps worthy of remark that though the cannabis and bromide were continued in many cases for long periods of time no depressing effects were observable. An increased appetite was noticed in some of the cases, while in others it would be difficult to say the appetite failed, for it could not well be less.

The indications for reducing the dose are symptoms rather of bromism. This occurred in several cases. A woman after taking one and one fourth grains cannabis and twenty-five grains bromide three times a day for six weeks became partially helpless, and had paralysis of the soft palate. From this she recovered in a week or ten days after stopping the medicine. This was the most marked instance, and, except for some slighter occurrences such as this, no bad effect was noticed. After the dose is reduced or omitted it takes several days to get over the effect, as might be expected, and it is as well a matter of a few days to get under its influence.

An objection to the tincture is that it is a bad looking and bad tasting dose, and I prefer a pill of the extract, which has been used to some extent. A solution of bromide containing considerable glycerine has been used, as this will for a day or two prevent a precipitation of the cannabis, which will occur if the simple aqueous solution and tincture are given in one dose.

From a comparison of results in the two series of cases the balance is much in favor of opium, still the cannabis and bromide will do good in some cases, and may sometimes be used when opium cannot. It should therefore not be discarded as a form of medical treatment in melancholia.

Dr. Clouston's conclusion was that "fewer cases of simple melancholia were benefited by the bromide alone or along with Indian hemp than any other form of insanity. Some were made worse by them, but in one case of this disease, when there was great excitement and hallucination of hearing and suspected organic disease of the brain, the combination gave immediate and complete relief of all the symptoms for four months." This conclusion appears to have been based on the observation of five cases.

Opium *may* have some other action, but its main effect appeared to be sedative.

If there were no diminution in the restlessness and agitation of the patient I should doubt any great advantage from its use, and this leads me to say that while it is not possible to predict that a given case will be benefited, in a general way it may be said that the most favorable results are obtained in cases of restless melancholia. In some there is apparent intolerance of the drug; the appetite fails, the patient loses ground, and the treatment must be abandoned. It should, however, be borne in mind that a loss in appetite is not always an indication for stopping its use. The modern idea of the opium treatment of melancholia is somewhat like that in regard to its use in peritonitis as compared with the older method. In treating a given case the dose should be increased till the patient becomes calm, or dangerous symptoms appear. The agitation of a case of melancholia is an entirely different affair from the excitement of mania, in which the use of opium is not advised, and there is, so far as I can see, no danger, with careful watching, in gradually increasing the dose to almost any limit.

Many of the cases reported were severe, and the chances of recovery small; in such more vigorous treatment is warranted than in the ordinary cases of simple melancholia that do well with attention to the general conditions of health and little or no medication. I have seen a modification of the "rest treatment" used with success in several cases of this character. In conclusion, I would remark that it is often extremely difficult to say whether or not a given remedy has been beneficial, and much more so to ascribe to it a cure.

RECENT PROGRESS IN FORENSIC MEDICINE.

BY F. W. DRAPER, M. D.

CREMATION AND CRIME.

BROUARDEL, professor of legal medicine in the Medical Faculty of Paris, in a report made to the Council of Public Health, and adopted by that body in August last, makes the following among other observations concerning the relation of crime to the practice of cremation in times of epidemic invasion.[1] He declares his belief that societies and individuals who seek to promote this method of disposing of dead bodies

[1] Annales d'Hygiène publique et de Médecine légale, October, 1883, page 315.

have not appreciated fully the medico-legal difficulties in their way. Cases of acute poisoning, he says, are of two kinds. One class includes the accidental cases in which it matters little whether the body is buried or burned. Illustrations of the other class present themselves under totally different conditions. One must be living in intimacy with a person to be able without ready detection to mix poison with his food. After the poison has been swallowed the one who has given it is often the nurse of his victim, sometimes the only witness of his sufferings. Frequently many days elapse after the death before rumor calls attention to the case as one of suspicion, and days, weeks, sometimes months and years intervene before the inquest is held. If cremation has effected the destruction of the body of the victim no trace remains permitting the authorities to confirm the guilt of one suspected, or, what is of equal consequence, to demonstrate the innocence of one falsely accused.

If, as those who favor cremation propose, an autopsy is invariably made before the destruction of the body is permitted, a great difficulty will still be encountered. The chemical detection of poisons often requires a month or two months of analysis. How shall we harmonize these complicated and laborious researches with frequent cremation? Then, too, if the expert finds in the dead body an alkaloid or a mineral poison, such as arsenic or mercury, inquiry must be made of the family to ascertain if the deceased person in the last months of his life had not taken as medicine one or another of these poisons.

It does not appear that hygiene finds any advantages from the cremation of dead bodies in times of epidemic invasion. The speedy equipment of proper apparatus for the combustion of several hundred bodies daily is almost an insurmountable difficulty when it is recalled that the best appliances now known cannot reduce an adult body to ashes in less than four hours. On the other hand it is not demonstrated that a cadaver dead from cholera, for example, can become an agent for the spread of the disease. Whether such a body be destroyed by fire or slowly by decomposition in the earth the result appears to be the same. It is impossible to invoke any danger that comes from the burial of cholera victims as a reason for the necessity of adopting the cremation of their bodies.

All writers on toxicology point out the similarity in the symptoms of cholera and of certain forms of poisoning. For example we may recall two of the agents most frequently employed with criminal intent, arsenic and corrosive sublimate, not to mention any of the alkaloids occasionally used in like manner. Dr. Laveran says: "In certain forms of poisoning and at the beginning of epidemics one cannot exercise too much caution in diagnosis." In the East Indies, according to Morehead, criminal poisoning is frequent during epidemics of cholera.

Brouardel sums up his objections to cremation as follows:—

The handling of the bodies subjected to cremation is such as to expose those engaged in the work to greater danger of infection than would be the case in burial.

The interests of justice and those, equally great, of persons unjustly accused of having committed crime, would be seriously compromised by the adoption of cremation.

If cremation is permitted only after an autopsy and an analysis of the viscera it would be necessary before adopting such a scheme to establish a great number of autopsy rooms, and to educate a numerous corps of experts. It is only when these various questions have been seriously considered and properly solved that cremation could be permitted without detriment.

ON DEATH BY COLD.

Dieberg[1] has formulated some valuable conclusions on this subject as the result of his observations on the bodies of thirty-one persons who died by exposure to cold. He found in all these cases that the heart in all its cavities was distended with blood of a fluid consistency and deep color, with an occasional soft clot. He determined the relative fullness of the heart by weight, and shows that although many of the victims of frost may be supposed to have been intoxicated when they became chilled alcohol was not the cause of the death, because in cases of fatal alcoholism alone, without the intervention of cold, he found the weight of the blood contained in the heart to be nearly four times less than in the others.

In explanation of the cause or manner of death in these instances the author states that under the effect of cold the tissues and the vessels undergo a contraction which is in proportion to the temperature depression; that the more superficial and thus the more exposed the vessels are the greater also will be their contraction; that according as the exposure to the cold is prolonged the contraction will progress from the periphery to the centre; that the heart will be able to send only a limited amount of blood forward into the vessels, the latter being unable to receive the normal supply; that the lungs continuing their functions still further supplies of blood are forced in upon the heart, and finally the arrest of that organ is effected, and death by syncope results.

This theory is in accord with facts observed by persons who have survived exposure to a very low temperature. In the report of his voyage to the North Pole Wrangel relates that when the thermometer on one day registered —53° C. every one suffered from headache, tinnitus aurium, subjective optic symptoms, and especially an extremely violent sense of weight and discomfort, indications apparently of circulatory disturbances.

Dieberg believes that death by cold is really due to syncope rather than, as Lesser and Hofmann have held, to asphyxia. In asphyxia one finds at the autopsy dark fluid blood, engorgement of the large veins and the right side of the heart, hyperæmia of the lungs and other organs, punctate hæmorrhages in the serous and mucous membranes. But in death by cold the blood is not always or wholly fluid; it contains clots, especially in the heart. Moreover, its color, instead of being very dark as in asphyxia, is of a brighter hue. Distention of the large veins is not observed, and in the heart the blood is equally distributed in the cavities, and is not found in relatively increased amount in the right side.

The author summarizes his conclusions thus: If, he writes, on making an autopsy upon a frozen cadaver one finds no appreciable lesions to account for the death, but discovers the heart engorged with blood in all its parts, he may declare that the individual was exposed to cold while still living, and that the cold was the cause of the death. If, on the other hand, the

[1] Vierteljahrsch. f. gerichtl. Med. u. offentl. San., xxxviii., page 1.

heart is empty of blood the examiner may conclude that the person was already dead when exposed to the cold, and that another cause of death must be sought for.

PUNCTURED WOUNDS.

Professor Hofmann, of Vienna, states in a recent article[1] that many errors have grown out of the notion which is widely entertained, by physicians as well as by the laity, that one can readily recognize, from the shape of a punctured wound, the kind of weapon which produced it. There is only one class of pointed instruments, those namely with a double edge, which makes wounds whose outlines exactly reproduce those of the weapon. The shape of such wounds is like that of a cross section of the blade, two arcs of a circle meeting at an acute angle. But double-edged blades are not the only ones which produce wounds of this shape; they could be made also by thrusts with a knife having a single cutting edge, or with an instrument conical in shape or many sided. Dupuytren and Malgaigne long ago established the fact that conical weapons make punctured wounds which are not round but linear, and they added the observation that the direction of these wounds was different according to the various parts of the body. In 1861, Langer elaborated these views and showed that the skin has a special "cleavage" for each region. In making deep punctures in various parts of the cadaver, he was able to mark out zones or areas more or less extensive wherein identity of appearances, due to the anatomical structure of the skin, was manifested.

With regard to ordinary knives, it is generally thought that they make wounds whose shape is that of a cone with the base larger or smaller according to the thickness of the blade. Observation shows that this is not true, but that oftener the wound terminates in two tapering ends just as if it had been made by a double-edged weapon.

Wounds made with blades with several faces usually have a stellate form, and the number of rays corresponds with the angles upon the weapon. When the little triangular flaps of skin outlined by the faces of the weapon have been forcibly driven inwards by the thrust, we may have a wound whose shape reproduces that of the blade.

With weapons which have a great number of sides and angles, the angles necessarily becoming more obtuse according to their number, we may have linear wounds like those made with conical blades; but there may often be seen little secondary rents, corresponding to the angles of the weapon, branching from the primary opening.

The foregoing rules are subject to some exceptions. Thus, when a conical weapon wounds a part where different systems of cleavage in the skin converge, the resulting lesion may be triangular. Wounds made with a knife may likewise show secondary cuts when the weapon is turned in withdrawing it. When the knife has penetrated a fold in the skin, the part, if put upon the stretch, will show an opening of zigzag shape.

The dimensions of punctured wounds may supply some indications for identifying the weapon used. But here again experience often contradicts theory. Thus with a conical weapon the wound generally has a length greater than the diameter of the weapon at the point where it was arrested. This is explained by the elasticity of the skin; but as this quality is limited, it may show itself, under the action of a thick conical instrument, in secondary rents, and then the principal wound is shorter than the diameter of the weapon. When one thrusts a very sharp knife into a cadaver, if care be used in entering and withdrawing the blade, a wound results whose length is equal to the width of the instrument at the point where it was arrested in the skin. But almost always the length of the wound exceeds the width of the blade because the cut is enlarged by the lateral movements made involuntarily in the thrust or the withdrawal, so that a very narrow blade may make large wounds and when these are superficial one might readily classify them as incised. It is plain from this that the manner of holding the knife with reference to the cutting edge has great influence on the resulting lesion.

Sometimes, on the other hand, the wound is smaller than the weapon which produced it. This is due to the retraction of the skin, which spreads the edges of the cut and thus approximates its extremities a little. This retraction is more or less marked according to the looseness of the skin's attachment to the subjacent tissues; and it is further modified by the direction in which the thrust was received, whether in a perpendicular or a parallel direction with reference to the line of cleavage in the dermal layers; it is thus that on the extremities wounds perpendicular to the long axis of the limb always gape more than others and hence appear shorter. This affords a practical hint; in taking the dimensions of such wounds it is well to bring the edges of the cut together into a rectilinear shape and then to measure the length only.

Knives whose cutting edge is dull may make punctured wounds much smaller than their own diameter. The same thing results with a cutting instrument sharp at the point and blunt in the rest of its length; in such a case, once the point has penetrated, the thicker part of the instrument simply stretches the skin, which by virtue of its elasticity returns to its previous condition, as far as may be, as soon as the weapon is withdrawn. When a blade of this kind is slowly pushed through the skin, a funnel-shaped depression is seen around the instrument at the point where it penetrates; upon reversing the direction in process of withdrawal, the skin forms a cone around the blade. A bayonet in this way makes a wound which may be a centimetre shorter than the blade's diameter.

If the weapon is very dull, it acts like a wedge and makes a wound whose direction is wholly subordinate to the anatomical structure of the skin; if, for example, one thrusts a dull bayonet into a limb perpendicularly to its axis, the resulting wound has a direction parallel with that axis. In these cases the wound is generally smaller than the weapon, always depending in this regard on the elasticity of the skin. But the aspect of the wound, if it shows secondary rents at its edges, proves that the skin has been stretched, and it thus furnishes important evidence of the nature of the weapon. In making on the same region of the body several punctures with a blunt bayonet, each time in a different direction, one sees that all these wounds are parallel, one with the others, and with the predominant direction of the fibres in the skin; but the direction of the little secondary rents at the edges of the puncture indicates that in which the weapon entered.

[1] Annales d'Hygiène publique et de Médecine légale, June, 1883, page 491.

MEDICAL EXPERT TESTIMONY.

It is to be regretted that in this important department of forensic medicine there is so little progress to report. The medical expert continues in his equivocal and unsatisfactory relations to the courts, and his testimony is of the familiar pattern in its character, methods, and results. In this State a spasmodic effort was made in the last Legislature to correct the admitted evils and abuses of the prevailing practice. A hearing was had before the Judiciary Committee, and the usual arguments in favor of reform were presented by doctors and lawyers deeply interested in the subject. A bill designed to meet the requirements of the case was formulated by the committee, but the measure perished speedily and ignominiously upon its presentation for legislative action, the opponents of the contemplated change being wholly drawn from the profession whose members are always ready to disparage expert testimony, but are equally ready to purchase some of it when it will serve their needs in the presence of a jury.

The Medico-Legal Society of New York has lately taken its turn in discussing the subject, and has devoted much energy in diagnosticating the disorder which afflicts expert testimony and in suggesting a line of treatment. The discussion was introduced to the attention of the Society by Dr. O. W. Wight, of Detroit, who besides being a physician is also a practicing attorney. In a valuable paper[1] he answers the question, "What is expert testimony and who are experts?" Expert testimony, he writes, just so far forth as it contains the special knowledge of the witness and is pertinent to the issue is relevant, material, and may be essential to the ends of justice; but just so far as it is opinion, personal view or theory, it is irrelevant, immaterial, and may be mischievous. Opinionated expert testimony is repugnant to justice, contrary to law, and alike intolerable to exact science and true art. The presence on the witness stand of one who thinks he knows but who don't know is a judicial misdemeanor; when, therefore, a judge admits a quack expert to testify in his court, for his own enlightenment and that of his jury, he makes himself responsible for the public scandal. Judges forget that in animadverting upon the character of expert witnesses admitted to testify in their courts they are criticising their own negligence. The habit of allowing parties in litigation to select experts beforehand for their ascertained favorable opinions, and to use them as partisan witnesses, is a desecration of the temple of justice.

The author draws a faithful sketch of the partisan expert as he appears in court, under the hands of an "all-sufficient, self-sufficient, in-sufficient" member of the bar, crammed for the occasion; the picture is realistic but unpleasant. Yet Dr. Wight is "hopeful for the future." The expert, he thinks, should be called in by the court, be under the court's considerate protection, and be compensated adequately by the public as other officers of the court are compensated. In no case should the interested parties to a suit be allowed to employ experts; and in turn experts should be prohibited under severe penalties from receiving any fees from litigants. It would be well if medical societies, organized on a sound basis, should designate those who are especially learned and skilled in particular departments of medicine and surgery as proper experts in those departments, and from time to time should furnish a list of such to the courts in their locality. Laws needed to carry out a plan of this kind ought to be speedily enacted.

In a paper reviewing the foregoing article,[2] Judge Delano C. Calvin, of New York, takes exception to Dr. Wight's definition of an expert, and declares that something more is required of the witness than the simple statement of scientific facts, and that the rule regarding the admissibility of opinions should not be modified. He approves, however, of Dr. Wight's plan of selecting experts, as designed to secure competent men, free from temptation to partisanship and prejudice. To the objection that such a scheme would invade the rightful prerogatives of litigants, Judge Calvin replies that all parties would stand alike, and that expert testimony has for its essential purpose the information and education of the court and jury in matters material to the right administration of justice.

The Medico-Legal Society before which these papers were read referred the subject to a committee composed of physicians and barristers; and the report of this committee, while agreeing in general with the views submitted by Dr. Wight, recommends a somewhat novel remedy for the evil. It suggests that "a body of medical experts be chosen by the judges of the Court of Appeals; that these experts be selected from a list of surgeons and physicians, to be recommended by the medical profession in some manner to be determined hereafter; that each physician or surgeon so recommended must have had at least ten years' practice as such, exclusive of hospital service, and that he must have spent at least five years in the active practice and discharge of duties pertaining to the specialty in which he is presented as having expert knowledge; that to these medical experts so chosen be referred all questions of medical jurisprudence arising in the courts; that counsel have a right to submit in writing to these experts any questions pertaining to the matters before them; that these experts report thereon to the court, and give in writing both their answers to and the questions submitted; that a compensation by salary or fee be fixed by the law for their services; that in either case the compensation should be liberal, and such as would amply repay any physician or surgeon for any loss of practice he might sustain or for the time spent in such service; that, as far as practicable, the above body of experts embrace and relate to every branch of medical jurisprudence."

Such are the latest views concerning expert testimony, and its deplorable need of reformatory treatment. Meanwhile, the established rules of law do not help the situation. What these rules are at the present time may be gathered from an instructive book just published, whose author has compiled from all sources the authoritative decisions of the courts of this country concerning expert and opinion evidence.[3] Some of these rules of law, so far as they apply to medical experts, are as follows:—

"The law does not recognize to the exclusion of others any particular school of medicine, or class of practitioners.

"To give an opinion on medical questions, one may be qualified by study without practice or by practice without study. Nor is it absolutely necessary that he should be a physician or have studied for one.

[1] The Medico-Legal Journal, September, 1883, page 140.

[2] The Medico-Legal Journal, September, 1883, page 200.

[3] The Law of Expert and Opinion Evidence reduced to Rules. By John D. Lawson. St. Louis, 1883.

"The opinion of a medical man is competent as to matters which he has not made a specialty in his study or practice.

"A medical man is not disqualified to give an opinion because he is not a graduate of a college and does not possess a license to practice; or is not at the time in practice; or because a case exactly like the one in question has never been seen or read of by him before.

"A medical man is an expert on the value of medical services, but not as to the measure of damages.

"The jury are not bound by the opinions of medical experts.

"Books of science and art are not admissible in evidence to prove the opinions contained therein; but books of exact science are admissible. An expert may testify to an opinion of his own derived from books; and when a witness has referred to a book as an authority for an opinion, the book is admissible to test his knowledge or to contradict him.

"A witness testifying to matters of opinion may be impeached by proof that upon a former occasion he had expressed a different opinion.

"The qualifications of persons offering themselves as experts may be tested by the opinions of others in the same calling.

"The qualification of a witness to testify as an expert is a question for the trial court, whose decision is not generally reviewable on appeal.

"The opinion of a witness as to his own qualifications is irrelevant.

"One not an expert may give an opinion, founded upon observation, that a certain person is sane or insane."

Such are some of the dogmas which are based on decisions of the highest courts in the various States of this country. Illustrative cases fully adjudicated, of which a great number are cited by Mr. Lawson, appear on every page of his book, and relieve it of the dryness which is said to characterize the literature of the law. The following quotation from a decision by Judge Temple, of the Supreme Court of California, will be an appropriate conclusion to this section of the Report: "Expert witnesses ought to be selected by the court, and should be impartial as well as learned and skillful. A contrary practice, however, is now, probably, too well established to allow the more salutary rule to be enforced; but it must be painfully evident to every practitioner that these witnesses are generally but adroit advocates of the theory upon which the party calling them relies, rather than impartial experts upon whose superior judgment and learning the jury can safely rely. Even men of the highest character and integrity are apt to be prejudiced in favor of the party by whom they are employed; and, as a matter of course, no expert is called until the party calling him is assured that his opinion will be favorable. Such evidence should be received with great caution by the jury, and never allowed, except upon subjects which require unusual scientific attainments or peculiar skill." [1]

— The two latest baronetcies conferred on medical men in England were bestowed on Sir Joseph Lister and Sir William Bowman. The latter is an honorary member of the Massachusetts Medical Society, having been made so in 1881.

[1] Ibid., page 243.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES M. WILLIAMS, M. D., SECRETARY.

DECEMBER 3, 1883.

DR. GEORGE T. TUTTLE read a paper on

CASES OF MELANCHOLIA,

which is printed in full on page 77.

DR. WEBBER said he saw these cases generally in the early stages. His experience with opium had been favorable, but he had not used it in many cases. He generally preferred valerianate of zinc and hyoscyamus, in one case he had added bromide of potassium. The prevailing tendency is to give chloral and bromide of potassium, but they may do harm when long continued. A combination of bromide of potassium and hyoscyamus often seems to be of service in melancholia.

In answer to a question as to the formation of an opium habit, the reader said that the patients do not know what they are taking, and the dose is usually reduced to a very small quantity before they leave the hospital. He had not known any bad effects from the drug.

DR. STEDMAN spoke of a case of melancholia lasting three months. The patient was twenty years old, and the attack had been caused by over study. Chloral and bromide of potassium in large doses had been tried without benefit. Opium given three times a day and a generous diet proved to be the best thing.

DR. FISHER said that he used narcotics less than twenty years ago, when opium was the standard treatment. In many cases the relief is very great at first, but often they seem to be injured by the morphia, and may sink into a condition of dementia. In one case where no sleep could be obtained without morphia suicide had followed; in another case the opium habit was formed. It is always necessary to keep the patient under hospital control until the morphia is discontinued. Sometimes a solution of quinine may be substituted for it, the same quantity of liquid being taken at each dose. He thought that often more harm might result from omitting than from using the morphia, and he was inclined to think that since the treatment with chloral and bromide had been in vogue the reaction against opium might have gone too far.

DR. COWLES said that the cases cited by the reader included all the cases of agitated melancholia that had been seen at the hospital for the past four years. The main reliance has been a general supporting treatment. The authorities disagree on the advisability of using opium. Many German and French writers advise it, other French and English authorities condemn the use of sedatives. In agitated cases that go on badly after five or six months, it is well to use morphia or other sedatives vigorously. In some cases where cannabis and bromide are used early, and the insomnia is controlled, the patient is better able to get the benefit of the general treatment.

DR. FOLSOM said that there was still some difference of opinion in regard to the opium treatment of melancholia. From his experience he is inclined to think that opium has but little effect on the disease, but for a sedative to relieve the symptoms it is better than anything else. Many cases get well in two or three months if no harmful treatment is used. Business

men often work off an attack by giving up their occupation for one or two months, or by diminishing their amount of work; others, where the attack is more severe with specific delusions, may get well in from half a year to two years; but here the opium cannot be used continuously without doing harm. In epileptics opium is hurtful when used continuously, but may be safely given for periods of a few days. Many cases of melancholia that he sees have been taking bromides, bromidia, etc. The first step is to omit these, give ol. morrhuæ, malt, open air exercise, and many hours in bed; the amount of exercise must be adapted to each individual case, and must not be overdone, as too much is as bad as too little; sleep may also be encouraged by taking food during the night. In exceptional cases, where the delusions are severe and distressing, less harm will often result from opium than from allowing the patient to go without it. At Danvers he has seen a number of cases treated without opium with good results; it is not unusual to have two cases in eight recover. He mentioned the case of a young lady who had severe melancholia, with the delusion that she and all the family were to be killed by persons waiting outside the house. She had been taking bromide and chloral. These were discontinued, and Vichy, malt, and out-of-door exercise were prescribed. At the end of four months she was well. No sedatives were used, and the recovery seemed more complete and rapid than it might have been without these remedies. In answer to Dr. Bowditch, he said that he had known cases where the opium habit was acquired, but they were less frequent now than formerly.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

Thursday evening, December 27, 1883. The President, Dr. Tyson, in the chair.

FRACTURE OF THE BASE OF THE SKULL.

Exhibited by Dr. Guy Hinsdale.

J. H. W., aged fifty, fell on the ice December 8, 1882, striking upon the stone pavement. The blow was received on the posterior and left side of the skull, and the skin was not broken. He was shortly afterward admitted to the Episcopal Hospital, and was totally unconscious. Blood was found flowing from his mouth and left ear, and his nose contained clots. His pupils afforded no evidence of his condition, because of an iridectomy which had been performed on both eyes some years previous. He talked incoherently; breathing was labored and at times stertorous. Paralysis of the left leg was noted.

Blood continued to issue from the left ear, and on the second day the discharge became thin, and continued serous until his death, which occurred on the eleventh day. The urine was examined several times, and found to contain sugar in moderate amount, but no albumen. Urine was passed freely. The patient never regained consciousness; he became more stupid, and paralysis of the left leg remained.

At the autopsy a superficial clot was found over the brain beneath the seat of injury. A very large clot was found over the right frontal region beneath the membranes, and filling the sulci between the convolutions. This was the result of the counter-stroke, the force having been first received at a point diametrically opposite, and fully accounts for the left-sided paralysis. The fracture was slightly over five inches in length. It extended from a point in the left occipito-parietal suture one and a half inches behind the temporal bone, and traversed the suture, passing through the petrous portion of the temporal bone, the auditory canal, close to the inner side of the foramen ovale towards the foramen rotundum, where it terminated.

NECROSIS OF THE TEMPORAL BONE AND BRAIN ABSCESS.

Exhibited by Dr. Guy Hinsdale.

This specimen was removed from the body of M. P., aged forty-six, who died in the Episcopal Hospital September 21, 1883, after long-standing aural disease.

In early childhood she had scarlet fever; this was followed by aural catarrh, and the discharge from the ear continued until her death. She stated that when twenty-two years of age a polypus could be seen in her ear. Fifteen years ago this was removed; again masses were removed thirteen years, two years, and one year, ago.

In May, 1883, four months before her death, the patient consulted Dr. Burnett, who has very kindly furnished me with notes of that date. The patient presented at that time a most wretched appearance. Extreme weakness, pallor, and emaciation betrayed the intense suffering of this unfortunate woman. Paralysis of the right side of the face had occurred during the previous winter without the supervention of additional ear symptoms. At the time of examination she presented great sensitiveness of the auriculo-temporal nerve, and complained of intense pain over the right temporal bone. To control this pain she was accustomed to use morphia suppositories. An examination of the ear revealed a mass of granulations filling the entire lumen of the auditory canal, half an inch from the entrance. Late in May a large polypoid mass was extracted; bare bone was then discovered on the posterior portion of the canal, the channel narrowed and blocked with granulations. About two fluid ounces of blood escaped after removing this mass.

When I saw the woman at the hospital in September she was in a very low state, and evidently near her end. Her mind was seriously affected, conversation was impossible, and she groaned with the pain, which large doses of morphia would not altogether control. There was a moderate but constant purulent discharge from the ear and from a sinus which was found above the meatus. The whole temporal region was boggy. The probe passed in freely over an inch, and loose particles of dead bone could be everywhere felt. The disease had long been beyond the reach of any remedy, and there was nothing to be done but relieve pain and await her death.

The specimen removed embraces portions of the right temporal, parietal, and occipital bones. Almost all the temporal bone has been destroyed. Only the mastoid process and the upper border of the squamous portion remain. An area of bone one and a half by two inches has entirely disappeared. Adjacent to this region, and lying next the middle fossa of the skull, was a brain abscess, the walls of which were greatly thickened. On opening this cavity about an ounce of thick yellowish pus was found. A probe easily reached this cavity through the auditory canal and the sinus above it, and many loose fragments of bone were found at the outlet. The styloid process was found loose, but held

in position by the various ligaments that arose from it. The inflammatory process, in which the meninges had of course shared, was not acute; the brain substance beyond the abscess walls had no unusual appearances, and the left cerebral lobe with its membranes were normal.

DR. C. H. BURNETT thanked the Society and Dr. Hinsdale for the opportunity of seeing this very interesting specimen, and of making a few remarks upon the case. The great destruction of bone tissue is remarkable and unusual in extent, being three inches in length and one and a half to two inches in breadth. The necrosis seemed to have originated in the tympanic region rather than in the mastoid, and hence belongs to the class of cases second in frequency, the most frequent being those fatal cases where the bone disease originates in and extends from the mastoid cavity. The case when seen by Dr. Burnett, in the spring of 1883, presented very grave symptoms, and the patient was extremely weak, so much so that Dr. Burnett was surprised that she lived until September. The occurrence of extensive granulations in the external auditory canal constituted a very unfavorable feature, as they acted like a dam, preventing the escape of the products of inflammation and held them back in the tympanic cavity and mastoid cells, forcing them to break an escape through more important and vital tissues. The case furnishes another example of the evil of neglect of purulent disease of the ear. Dr. Burnett inquired whether there were symptoms of destruction or implication of any of the nerves passing through the cavernous sinus, as would be shown by alteration in parts supplied by the oculo-motor, the pathetic, and ophthalmic nerves.

DR. HINSDALE replied that no eye symptoms had ever been detected.

CASE OF PHTHISIS WITH EMPYEMA.

Presented by DR. H. M. FISHER.

The patient, J. C., aged twenty-one, was admitted to the Episcopal Hospital March 17, 1883. The following notes of the case were taken by Dr. George M. Boyd, the resident physician. Patient states that he has had a slight cough for one year, but was not much annoyed with it until about one month ago, when he was seized with severe pain in the left chest, accompanied by chilly sensations and difficulty of breathing. Upon admission he presents all the symptoms of left pleural effusion, absent vocal fremitus, tubular breathing, and bronchophony in the neighborhood of the spinal column on the left side. His chest was tapped on the morning of March 21st, and three pints of a semi-purulent fluid were evacuated. The operation was followed by great improvement in the patient's symptoms. Three weeks later he left the hospital, contrary to advice. He was readmitted April 20th, and stated that, soon after leaving the hospital, the pain in the side returned, followed by dyspnœa. April 23d paracentesis thoracis was performed by Dr. Henry, and fifty-six ounces of purulent fluid were drawn off, and the operation again afforded great relief. A violent fit of coughing followed the withdrawal of the canula. The heart's apex beat was found, before the operation, to be immediately below the right nipple; after the operation it was found to have shifted one inch to the left of its previous position. May 5th Dr. Forbes operated at Dr. Henry's request, making two openings into the left pleural cavity, one at fifth interspace, the other at the fourth and to the right of the first. Ten ounces of purulent fluid were withdrawn by means of the aspirator, and a soft rubber catheter was passed in at one of the openings and out at the other. The pleural sac was then ordered to be washed out daily with a solution of corrosive sublimate, one grain to the ounce.

During the summer the patient's general condition seemed for a time to improve; his appetite, however, continued obstinately bad, and he had constipation alternating with diarrhœa. In October it was noted that he was losing flesh and strength rapidly, and that there was much œdema of the feet and legs. During this month diarrhœa became a constant symptom, and death occurred November 22d.

Post-mortem Examination (ten hours after death). The body is extremely emaciated. The left lung is contracted to about one fourth of its normal size, and contains in its upper lobe some cheesy masses with areas of catarrhal pneumonic infiltration. The left pleural cavity contains about five ounces of ichorous pus. The parietal layer of the left pleura is so tightly adherent to the chest wall that it is impossible to detach it without dissection. The pulmonary layer is also tightly adherent to the contracted left lung, the lobes of which are firmly matted together by adhesions. The right lung also presents numerous cheesy foci with large areas of catarrhal pneumonic infiltration. The heart is rather small, and its tissue is pale, but its valves appear normal. The liver weighs six pounds six and one half ounces, its tissue is pale, and it has a *markedly waxy appearance*. The spleen is much enlarged, its tissue *firm, and of a dusky-red hue*. Numerous *yellowish white nodules* are also seen in it, the largest of which is perhaps of the size of a small pin's head. The kidneys are rather large, their capsule is non-adherent, and their tissue rather paler than normal. Numerous *minute whitish nodules* are also found to be scattered through the tissue of both kidneys. These appear rather more numerous and larger in the cortical portions, but are also found in the medullary portions. From some of the larger nodules a whitish puriform substance can be squeezed out with the blade of the knife. With the naked eye the exact nature of the above-mentioned infiltrations of the spleen and kidneys is difficult to determine. Nothing abnormal was noticed in the intestinal tract, except in the ileum, where an area of intense congestion was noticed about one yard from the ileo-cæcal valve, but no ulceration was anywhere detected.

My view of the sequence of pathological events in this case is the following: First, catarrhal pneumonia with the production of cheesy foci; secondly, scrofulous inflammation of the pleura with attendant exudation, which from the start was probably more or less purulent; and thirdly, the infiltration of the *liver, spleen*, and possibly also the *kidneys* with amyloid matter.

The exact nature of the yellowish white nodules in the spleen and kidneys being yet undetermined, I cannot yet assign to them a positive place in the chain of scrofulous processes, but from the absence of any microscopic evidence of embolic infarctions, or of any appearance of infarction in the one microscopic section of the kidney I had the opportunity of examining (kindly made for me by Dr. Henry), I should conclude that these were also cheesy foci, and their production may perhaps have nearly coincided in point of time with the production of the cheesy foci in the lungs above alluded to.

Dr. Shakespeare said that specimen was a good instance of miliary tuberculosis. The small collection in the spleen might be tuberculous, he thought, and should have been examined for tubercle bacilli. He adverted to the successful employment of very weak solutions of corrosive sublimate in washing out suppurating serous cavities.

ATHEROMA, DILATATION, AND ANEURISM OF THE AORTA; ATHEROMA OF SOME OF ITS BRANCHES; DEATH FROM RUPTURE OF THE ANEURISM INTO THE LEFT PLEURAL CAVITY; CONGENITAL DEFORMITY OF THE STOMACH; MALPOSITION OF THE TRANSVERSE COLON AND RIGHT KIDNEY; IRREGULAR SHAPE OF THE KIDNEY; ANOMALOUS ORIGIN OF THE RENAL ARTERIES AND OF THE URETERS.

By J. H. Musser, M. D.

This remarkable series of specimens illustrates how serious a disease can be in progress within the body without any manifestations. The patient had been under the care of Dr. Ludlow in the Presbyterian Hospital, complaining of, and being treated for, nasal catarrh. He complained, also, of a slight bronchitis, but, it not being very decided, the nasal trouble alone was treated. A white man, aged sixty-three, well nourished, of temperate habits, and by occupation a wheelwright. He was under observation ten weeks. No previous illness. He slept well the night before his death until five A. M. He then told the night nurse he was very cold. Being covered, he went to sleep apparently; an hour afterwards he was found dead. The writer made the autopsy about twelve hours after death.

Inspection. Rigor mortis well marked; body well nourished; no scars or bruises; no ecchymoses; abdomen moderately distended; in the right lower quarter a decided swelling was noticed, almost filling that area and resonant on percussion.

Section. Abdominal cavity first examined. The above-described swelling was due to the cæcum and transverse colon. The ascending colon extended about half way the usual distance and then turned at a sharp acute angle into the transverse colon. The latter descended parallel to the former into the right iliac fossa, and from thence diagonally upwards across the abdomen to the usual place of junction with the descending colon. The omentum contained a considerable amount of fat. The right lobe of the liver could not be seen until removal of the ribs, when it was found two inches above their margin and to be only two and one half inches in length in the nipple line. In the median line this same perpendicular length was three and one half inches. More of the left lobe was visible than the right. Along the edge of the left lobe, from the median line, four and one half inches in length, extended the *stomach*. It appeared to be small in size. When removed it was found to be divided by a constriction five inches from the fundus; from this constriction to the pylorus the length was four and one half inches. The first or cardiac end was much smaller than normal, the walls and mucous membranes healthy. The second portion was a mere tube with thick walls. The thickening was due to the hypertrophy of the longitudinal muscular layers, and to the folds that the mucous membrane was thrown into. These folds were very marked, longitudinal, and, on their crests, congested. The peritonæum was opaque and thickened. The *liver* was smaller than usual also. The capsule was thickened and opaque along the edges of the right lobe; on examining surface there were cicatrices and a firm adhesion at one point to the diaphragm. On section the tissue was firm on pressure, and congested. Commencing cirrhosis noted on microscopical examination. The gall-bladder projected one inch below the liver margin in the nipple line.

The left *kidney* was found in its normal position. It was much enlarged, five inches long, two thick. The pelvis was filled with fat, the substance pale, hard on pressure, with a contracted cortical portion. The capsule tore off easily. The right kidney was found in the pelvis at the right sacro-iliac articulation. It was small in size, irregular in shape, parallel to the sacrum. The portion dipping downwards tapered to a point, being one half inch in width; the upper portion was two inches wide. The pelvis of the kidney was filled with fat. Towards the small end of the kidney the hilus divided, one part extending upwards one inch along one side of the organ, the other the same length on the other side; or it might be said, a portion of the kidney dipped into the pelvis, separating it for an inch. The renal artery arose from the normal origin of the middle sacral. One inch from the point of origin it divided, one branch, one inch long, entered one lateral hilus, if it may be so termed, the other divided two and one half inches from the main trunk, one subdivision entering the remaining lateral hilus, the other running across the floor of the pelvis to the normal end of the kidney. The ureter arose in three branches — two from the upper end, one from one of the smaller pelves.

Thoracic cavity. Left pleural cavity almost filled with blood, the lung floating on the fluid. The lateral surface was adherent to the aneurism. In its removal the collapsed sac was seen on the left side of the vertebral column. The heart and aorta were removed entire. Heart enlarged, left side especially; measurements of left ventricle: round base, one and one eighth inches thick, in the middle, seven eighths inch thick, at apex, one half inch thick; mitral valves a little thickened; aortic healthy. Atheromatous processes were present in the aorta from its beginning to the cœliac axis, and extended into the latter vessel and also the innominate and carotid arteries. One calcareous plate was found in the cœliac axis. From its origin to the middle of the transverse aorta the vessel was dilated, and the characteristic fatty changes of the proliferated cells of the intima, lemon-yellow colored, smooth, soft elevations, were marked. Opposite the trachea the calibre of the aorta diminished to almost normal size, and here the sclerotic changes were most marked as well as around the mouths of the vessels. At the junction of the transverse and descending aorta the lumen was again closed. Here the aneurism originated. It was five and one half inches long, and, where distended, twelve inches in circumference. It was of the true variety, but from it sprung four false aneurisms, varying in size from a filbert to a small egg. Organized clots covered the surface of portions of the wall. Rupture of the sac took place behind and in pleural adhesions, and leaked into the cavity, finding its way through the adhesions. The vertebræ were not eroded, and although the sac was in contact with the left bronchus there were no evidences of decided pressure upon it, while the relations to nerves, other vessels, and the œsophagus were such that the usual pressure symptoms could not arise.

It is thus seen that by physical examination alone this aneurism could not have been detected. There were absolutely no subjective symptoms, and the autopsy reveals the reasons of this.

HOUR-GLASS CONTRACTION OF STOMACH. CONGENITAL.

Presented by J. H. MUSSER, M. D.

The patient, an adult, from whom I removed this stomach, died of organic heart disease. Constant vomiting occurred a few months before death, but as a consequence of the general condition of the patient, and not on account of the gastric change. I call the appearance congenital because of the absence in the clinical history of any occurrence throughout life to have caused it, and of the want of evidence on post-mortem inspection. The contraction took place in the centre, and was transverse. The peritonæum and submucous connective tissue was thickened at this point. Anterior to the constriction the muscular coating was hypertrophied. The mucous membrane was thrown into folds by the constriction.

LUNG FROM A CASE OF PLEURO-PNEUMONIA COMPLICATED WITH DELIRIUM TREMENS.

Presented by J. H. MUSSER, M. D.

I present this specimen to-night on account of its perfection. It is the lower lobe of the right lung in the stage of red hepatization, as indicated by the appearance, weight, etc. Almost the entire pleural surface, including the diaphragmatic, is covered with recent lymph, the layer averaging one half inch in thickness. The tongue of the lung dipping into the space between the diaphragm and the thoracic wall is not solidified entirely. Here the lymph is abundant, and the contiguous portion of the lung hepatized, as if the inflammatory process extended from the pleura. This peripheral hepatized portion is but one fourth inch wide. The inner and succeeding portion is not solidified.

The patient died eighteen hours after admission to the hospital, from heart-clot. When admitted there were evidences of its formation, and in addition he had the delirium tremens. The pneumonia was distinctly recognized. There were no signs of simple or diaphragmatic pleurisy. At the autopsy on removing the sternum, the extreme distention of the right heart, was remarked, especially the auricle. On opening the heart, hypertrophied from other causes, the right side was found filled with blood, and an enormous antemortem clot entwined around the leaflet of the tricuspid valve and extending through the auricle into the pulmonary vessels. A similar clot was found in the left heart. The kidneys were congested, and commencing cirrhosis appeared manifest.

The history of the case antecedent to the admission to the hospital is as follows: The patient had been on a "spree" for two weeks, and five days before admission had had a severe chill followed by the symptoms of pneumonia. Two days after the chill the mania developed, and on the day of admission he had been found wandering about the streets by a crony, who brought him to the hospital. He was forty-one years old, a boss machinist, single, of intemperate habits.

CARCINOMA OF THE UTERUS; FATTY KIDNEYS AND EMPYEMA.

By W. A. EDWARDS, M. D.

The specimens which I show you to-night were taken from the body of A. E. this morning. I have not, as yet, had the opportunity of examining them microscopically. The patient was visited but once before her death by Dr. J. S. Watt, for whom I made the post-mortem examination. The history of the patient is of course imperfect; in fact, little if any could be obtained; the symptom of which she complained the most was an ill-smelling, irritating discharge from the vulva, so our attention was first directed to the womb, which presents a scirrhus carcinoma of the external and internal os and of the cervical canal. The mucous membrane of the organ is softened and very rugous, looking not unlike a mammillated stomach. A microscopic section will probably show cellular infiltration. The uterus is enlarged; our subject was a multipara, aged forty-five, nine children and two miscarriages. A cyst was seen in the right parovarium, its contents was pure serum. The ovaries presented areas of calcareous degeneration; other pelvic viscera normal. The kidneys are small, and appear to have undergone some amyloid change; the right one was a rib higher than its normal position.

Heart muscle has undergone some fatty degeneration as has also the aorta; valves almost normal, antemortem clots in each ventricle, that in the right is of unusual size. Pericardium contained the usual straw-colored effusion.

Lungs: Left normal. Right, the pulmonary and costal pleura were in many places adherent by thick, well organized lymph, which beautifully illustrates the rationale of friction râles, their sudden appearance, short duration, and equally sudden disappearance. About a pint of purulent effusion was collected in the base of right chest. The diaphragmatic pleura was tightly adherent to the pulmonary, requiring some tearing in order to separate. The lobes of this lung are bound down by recent lymph. Scattered throughout the mesentery were to be seen areas of calcareous degeneration, about the size of almonds.

Recent Literature.

Wiesen as a Health Resort. WISE. London: Baillière, Tindall & Cox. 1883. 68 pages.

This little book is an evidence of the growth in favor of high altitude in the treatment of early phthisis. Davos and St. Moritz have become fashionable, and consequently expensive, but consumption and the desire to be rid of it are not confined to the rich. Wiesen, moreover, seems to have some special advantages in situation apart from its cheapness. It is eleven miles from Davos, and about three hundred feet lower, but lies on a hill-side, about one thousand feet above the river, while Davos is in the valley, and but little above the river level; while equally protected from cold winds by mountains, Wiesen is, therefore, dryer than Davos. Full details are given as to the best means of reaching these Alpine sanitaria, at the same time that the visitor is advised as to clothing and informed as regards accommodation, food, resources for passing the time, physicians' fees, and the like. At the end of the book unusually full meteorological tables are inserted, doubling its thickness if not its value. A special table shows the cases of death since 1834, and from this we learn that if any inhabitant of Wiesen ever died of consumption he brought no discredit to his native place by dying there. The writer evidently wishes to

be fair, and we can recommend his book as containing useful information alike to those who think of seeking health for themselves in the Alps in winter, and those who send others in the search thither. F. C. S.

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THE HEATING OF DOMICILES.

THE problem of how best to heat our dwellings is (be it said without a quibble) a burning question. Many plans have been suggested, some of which have erred by premising that methods which have been found sanitary and available in England, for instance, would be equally feasible in our country. This has been the mistake of those who have advocated the open fire-place, or its congener, the open grate, as a sole means of heating. In England and in many Continental countries these methods have proved sufficient. But any one who has tried to warm a New England house by means of the time-honored and æsthetic hearth and andirons has discovered that he has burned up a small fortune, but has not succeeded in making his house thoroughly comfortable. The fire-place, excellent ventilator as it is, and useful adjuvant to other calorifacient agents, cannot be depended upon to entirely *heat* a house in this climate. Only twelve per cent. of the heat value of fuel thus burned is rendered into the room, the remainder passing up the chimney. Even were one to burn an open fire in every room, which is hardly practicable, there would be many draughts felt in cold weather at the further portions of the apartments, for air must be drawn in from without to supply the constantly ascending current, and it is known that a considerable transmission of air takes place through stone, brick, and plastered walls. So that in freezing weather the occupant of a house thus heated would be subjected to constant risk of colds from draughts as well as from too low a general temperature.

At the opposite extreme from the open fire, as an economist of fuel, stands the close stove, which gives out into the room seven eighths of the heat which the fuel produces, and loses an amount only equal to the small proportion which the open fire-place saves. Yet while it warms it admits no fresh air to the room, and takes but little foul air out. It is now generally admitted that heating and ventilation should be combined, and that that system is best which introduces an abundance of pure, warmed air into the living apartments, and removes the exhausted air. Another objection to stoves is the increased care and expense of maintaining a separate fire in each room. Preference is therefore given to some general system which warms all rooms from one common centre either within or outside the house.

The two rival methods are the furnace and steam heat.

In the February number of the *North American Review* we find a discussion between representatives of these two opposite methods. Dr. A. N. Bell, known to some of our readers as the editor of the *Sanitarian*, presents the claims of the furnace as, on the whole, the best system of heating the average moderate-sized dwelling. It is noticeable, however, that his requirements for the furnace are by no means fulfilled by most specimens of that article found in the market.

He lays emphasis on (1) a chimney draught stronger than that in the hot-air pipes so that all gaseous emanations which may be caused by crevices in the joints or a cast-iron pot which becomes overheated may be drawn off through the chimney.

(2.) The draught should be all from below the grate, with no dampers in smoke-pipe or chimney.

(3.) The fire-pot should be lined with fire-brick, and while entirely within the furnace, yet separate from it so that the fresh air to be warmed cannot come in contact with the fuel chamber.

(4.) The cold air should always be taken from out-of-doors, and the shaft should be turned up on the outside several feet from the ground, covered with iron netting and a cotton dust-strainer, and the diaphragm for controlling the ingress of air be placed at this point rather than in the cellar.

(5.) The inlet shaft should be at its smallest part, of an area amounting to one sixth of a square foot for every pound of coal estimated to be burned hourly in cold weather; and the collective area of the hot-air pipes should not be more than one sixth greater than that of the cold-air inlet. This last precaution is to prevent one hot-air pipe from drawing its supply of air from another, an accident which is not uncommon when the cold-air box is not large enough.

(6.) The heating surface should be large. As a rule there should be ten square feet of heating surface to every pound of coal consumed per hour in active combustion. The grate area should be one fiftieth of the heating surface.

Prof. W. P. Trowbridge, who is an advocate of steam heating, makes strictures on the furnace system, some of which are forestalled by the precautions that Dr. Bell inculcates. His principal argument is that the furnace heats the air to a temperature of from 250° F. to 400° F., and that by mixture with cold air it is brought down to 150° F. or 200° F. at the time it enters the rooms. Of course it requires further admixture with cool air, for which reliance is put upon accidental leakage from doors and windows. These highly heated currents of air have a great capacity for absorbing moisture from all sources. It is just at this point that the great and vital objection to most furnaces lies. Air that has once been heated to 300° F. or 400° F. is not fit to breathe. The device of setting

water to evaporate in the heating chamber is, in our opinion, comparatively useless. Such air when admitted to a room has a peculiarly dry and irritating character. It warps doors and other wood-work, shrinks the joints of furniture, withers plants, and dries up the mucous membranes of the occupants. It certainly seems not unreasonable to attribute a considerable proportion of the nasal catarrhs, ophthalmias, and winter colds of the community to such causes instead of laying them all to the account of "our wretched climate." A few years ago the theory was advanced that this depraved state of the air in furnace-heated rooms was due to the use of cast iron in contact with the flame, and accordingly wrought-iron furnaces came into the market. Dr. Bell evidently shares the prejudice in favor of brick-lined pots, but the radiating surface above the flame must be of iron, and, if we remember right, Professor Remsen concluded, as the result of some experiments conducted on this point, that the purity of air exposed to superheated metal was no greater in the case of wrought than of cast iron. At all events the practical point to be guarded against in furnaces is the *overheating* of the air, and this we understand to be the object of most of Dr. Bell's directions.

There are two methods of steam-heating, the direct and the indirect. In the former the steam is led from the boiler to a coil of pipes in the room to be heated, called a radiator. From this augmented surface the heat is diffused into the room. The principle involved in this method is not materially different from that of stove heat. Both warm by radiation from a hot surface without bringing in any fresh air. One important difference (if it were a question of preference between steam radiator and stove) is that the pipes are never heated by the steam to a temperature higher than from 210° F. to 310° F., while a stove may become heated in extreme cases as high as 950° F. The element of ventilation can be added, though imperfectly, to direct steam radiation, at some sacrifice of heat, by placing the radiators near windows, and letting in out-door air under the sills to be heated and then diffused over the room. By the second or indirect method the steam is conducted from the boiler to a close chamber, which is directly under the tier of rooms to be heated. Here the pipe makes a coil, and to it is admitted fresh air in large quantities from out of doors. This air is warmed to a less degree than by any other method, say to 70° F. or 100° F., and is then delivered directly to the rooms in large quantities by pipes and registers. The comparatively low temperature of the current is economically in part counterbalanced by the increased amount of heated air thrown into the room, and by the fact that the pipes ascend almost directly, and do not lose heat, as in the furnace, by being carried horizontally, as each stack of pipes is supplied from its own radiating chamber directly underneath it.

In conclusion it may be said that wherever the boiler can (as a precautionary measure) be placed outside the building to be heated; wherever the building is so large as to require more than one furnace, if the furnace were used; wherever the heat must be transmitted to a considerable distance horizontally from its source; or wherever a number of apartments can be heated from one common centre, the indirect steam system is to be preferred. But that for the average dweller in a detached house of moderate size this system, as at present arranged, cannot be expected to become popular on account of the increased original expense of the "plant," the slightly greater intelligence necessary to understand, and skill to operate it, the liability to condensation of steam when the fire runs low, and the "pounding" which is caused when the newly-formed steam drives the water in the pipes, and which occasionally produces explosions or leaks. Finally, that in most cases where the expense of the steam system cannot be incurred, a sufficiently safe method of heating is by the furnace, care being taken to introduce a large quantity of pure out-door air to the furnace chamber, and thence into the rooms, and to see that this air is not allowed to come in contact with over-heated metal; moreover that the open fire-place is a most useful addendum to the furnace system by affording a means of escape for vitiated air, and thus maintaining a constant current through the apartment.

IS THERE A NON-CONTAGIOUS ERYSIPELAS?

THE contagiousness of erysipelas would seem to be established clinically beyond a doubt. Striking instances in abundance are narrated in our text-books of the spread of the disease in families and hospital wards which it is unnecessary to repeat. The presence of micro-organisms in erysipelatous tissues has been abundantly established, and Dr. Fehleisen, of Berlin, has recently published the results of experiments undertaken to determine whether a species of bacteria peculiar to erysipelas is regularly demonstrable, and if this is so to inquire whether this micro-organism stands in an ætiological relation to the disease. A micrococcus, identical with one figured by Koch, was found in each one of eleven cases examined. To demonstrate that this was a specific organism and not merely accidental, attempts were made to cultivate it outside the body. After numerous failures the micrococcus was at length successfully cultivated upon Koch's meat-peptone-gelatine, and fourteen generations were produced. Though somewhat similar organisms are found in the pus of wounds and in pyæmia the mode of growth of the micrococcus of erysipelas was found to be characteristic. Experiments were first made upon rabbits to test the question whether, when inoculated, it would produce genuine erysipelas. Nine were inoculated on the tip of the ear with the cultivated micro-organisms, and in eight a typical erysipelas was produced. Inoculations of the cultivated bacteria were also made upon the human subject. An accidental attack of erysipelas has proved beneficial in such diseases as cutaneous tumors, lupus, and carcinoma, and in six cases of this sort the experiment was deemed justifiable. In each of these cases the characteristic symptoms were developed after an

incubation of from fifteen to sixty hours, and it was felt that no room for doubt remained that inoculation with Fehleisen's cultivated micrococci had for its result the production of a genuine erysipelas; the specific nature of the contagium and the contagiousness of the disease would seem to be established.

Thus scientific research seems to enforce clinical observation in regard to the highly contagious character of the disease. But there is another set of opinions, based on clinical study, diametrically opposed to the opinions referred to.

Mr. T. Holmes, in a letter to the *Lancet* in May last, wrote: "It has always seemed to me that erysipelas, though no doubt under some circumstances contagious, is very feebly so, and that when it spreads in a hospital it does so in consequence either of carelessness in nursing or of impurities in the wards far more frequently than from contagion. In fact I have never myself seen a case in which I could trace contagion."

Dr. Goodridge, Physician to the Bath Royal United Hospital, writes in the *Practitioner* of December, that after a pretty long experience in a provincial hospital, where cases of erysipelas have always been admitted into the ordinary medical wards, he has never known the disease spread from bed to bed.

Billroth speaks of the disease as propagated by a contagium which is considerably less infectious than that of measles or scarlet fever.

In view of these opposing beliefs Dr. Goodridge is led to ask whether there are not two distinct forms of disease classed under one head, as from superficial resemblances, which may be very close, diseased conditions are apt to be confounded together which yet are fundamentally distinct. His personal experience strengthens this view. He has been the victim of three attacks of erysipelas of the head and face. Of these the first and third were distinctly infective. In the second case, which followed exposure to the sun, there was no constitutional disturbance. The case presented all the usual naked-eye features of erysipelas but without the tendency to spread, and resolving without delay, was clearly an instance of simple, non-infective inflammation, a simple dermatitis. He is led to the conclusion that in cases of facial erysipelas as they ordinarily present themselves in practice, whatever secondary varieties may exist, there are primarily two distinct forms to be dealt with, namely, the infective and the non-infective forms, or as the distinction, it will be seen, may otherwise be expressed, true genuine erysipelas and spurious or pseudo-erysipelas. "Without venturing to indicate in what ratio these two forms stand to one another as to frequency of occurrence, I am quite sure that I have again and again seen and treated cases of the latter — cases in which the local affection has followed exposure to heat or cold or other injurious influences, and the fever and general disturbance have been comparatively insignificant." Mr. Jonathan Hutchinson, in his paper On Certain Diseases Allied to Erysipelas clearly recognizes their existence when he says: "These forms of erysipelas which are due to local irritation are, I think, almost always mild. It is when the disease is due to contagion that it assumes its greatest severity."

The question is not a new one. It must have suggested itself to many. In 1871 Maurice Reynaud suggested that septic principles differing one from the other might possess the common property of producing the local and general accidents of erysipelas. Such an idea would explain so easily "how all cases of erysipelas are far from possessing the same degree of gravity, how some are contagious although others are not." It would seem that in time the researches in the line followed by Fehleisen would solve the question.

MEDICAL NOTES.

— We have reason to believe that a man, sometimes pretending to be deaf and dumb, is falsely representing himself to be an agent for the Journal, in common with other medical periodicals, in the States of Indiana and Michigan. We have at present no *traveling* agent in those States.

— "At one end (of the salon), in huge electric letters, I saw the words, 'Welcome, restored old patients;' at the other end, 'Dr. Pierce, the Hotel Founder;' in the centre of one long side, 'Golden Medical Discovery;' and along the ceiling, also in electric letters, 'Purgative Pellets.' . . .

"'And now,' said the Queen of Health, 'let me present you to my prime minister.' Timed with her gesture to the right, I turned my eyes, and there saw, in evening costume, a robust gentleman, of medium stature, who was in physique the very ideal type of American manhood. He seemed the very embodiment of healthful, vigorous vitality, and on his full, lofty brow I saw great indications of comprehensive mental power, sweet benevolence, unvarying courtesy, tender sympathy, and business sagacity. . . .

"I saw two venerable, sweet-faced men of Grecian features approaching the Queen of Health, holding in their hands two wreaths of evergreen — the veritable laurel from the Athenian groves. She stepped from her throne, as complaisant monarchs do, and raised them to her dais. Another bugle for silence, and she spoke: 'My guests, before we sup, an interesting ceremony remains. He on my right is Hippocrates from the Spirit Land. He on my left is Æsculapius. They come to crown our Dr. Pierce with the great laurels of his noble profession — they the great Past Grand Masters of the Healing Art, who best know who is conqueror of disease.' In a moment Dr. Pierce was about bending his knee in respectful obeisance to these ancient professors, when a gesture from both arrested him, as with dainty but dignified motions they placed upon his head the laurel leaves, each saying in a unison of musical monotone, 'Thou art our legitimate successor,' while a burst of orchestral acclaim and a chorus of thanksgiving huzzas from the guests arose. Immediately above this royal and supernaturally looking tableau I saw in pillars of rosy light these great words, the motto of the crowned Dr. Pierce, and which

reveals the secret of his almost divine success, 'THE BLOOD IS THE LIFE.'"

The above we publish as a specimen chapter. The remainder will be found only in the advertising columns of — well, we are ashamed to say, of a *Review*, which for over a half a century has occupied a foremost place in American literature. The rhapsody is ascribed to an American girl abroad, but the suggestion occurs that she wrote it when about half way on her passage thither.

— On February 1, 1884, the New York Post-Graduate Medical School, at which, since its foundation, 140 students have availed themselves of the vast amount of clinical material placed at their disposal, will take possession of more commodious accommodations located in East Twentieth Street. This change is the more advantageous as the building to be occupied is of such proportions as to admit of increased attendance on the part of both students and patients.

— The *Medical Times and Gazette* comes to us in its first issue for 1884 in an enlarged and much improved form. Its table of contents indicates a high order of excellence, and in general this periodical is evidently to become, if it is not so now, one of the most useful of the English medical publications.

— We learn that Secretary of State Frelinghuysen, having determined to establish in Egypt a system of inspection and disinfection of rags destined for the United States, has communicated this intention to the Boston Board of Health and asked its views as to the propriety of such a course, and also suggestions as to the best method of purifying rags. The Board has replied, heartily approving the plan, and suggesting Dr. George M. Sternberg, Surgeon, U. S. A., as an authority on disinfectants.

— The *International Review of Medical and Surgical Technics*, the official organ of the American Association of the Red Cross, a new quarterly journal edited by Dr. Joseph H. Warren, has reached us in its initial number. Its aim is to present a description of the principal instruments and appliances described in American and foreign journals.

— Dr. John Taylor Gilman, of Portland, Me., is dead at the age of seventy-eight. He was a prime mover in the establishment of the Maine General Hospital, and was president of the Maine Medical Society in 1864.

NEW YORK.

— Up to the 18th of January the contributions to the Hospital Saturday and Sunday fund had reached the sum of $37,742.08. This is nearly $8000 more than the entire amount contributed last year, and it is probable that a considerable sum yet remains to be reported.

— Dr. Henry A. Du Bois, who died on the 13th of January at his residence in New Haven, was formerly well known in New York, where he was born, and where he spent a considerable portion of his life. He was graduated at the College of Physicians and Surgeons in 1830, and after spending some time as an interne at the New York Hospital went to Europe, where he remained for three years studying under the most distinguished masters of medical science in London, Paris, and Edinburgh. On his return, in the latter part of 1834, he at once took a high position among the physicians of the city, and became especially prominent during the scarlet fever epidemic of 1838, when he won an honorable notoriety by taking a firm stand against the severe antiphlogistic treatment which was then in vogue. He recognized the disease as a self-limited affection, which it was impossible to cut short by any heroic measures that might be adopted, and devoted himself to supporting the system with quinine and a highly nutritious diet until the fever had run its course.

— A tobacco merchant of New York died at his home in that city on the 13th of January, of yellow fever. He had been in the habit of often making business trips to Cuba, and during the month of December spent eighteen days in Havana. He reached New York January 7th, and the next day he was attacked with yellow fever. A favorable issue was anticipated, however, until the morning of the day he died, when he was seized with uræmic convulsions. The autopsy, at which Prof. E. E. Janeway, Dr. J. B. Taylor, Chief of the Fourth Sanitary Division, and several other physicians were present, confirmed the diagnosis of yellow fever.

PHILADELPHIA.

— Two new associations are in process of gestation at present. During the present month a Committee on Permanent Organization of the Philadelphia Neurological Association will report in favor of forming a society for the study of neurological science in all its departments. The officers of the insane hospitals in this neighborhood will form a part of the membership.

A society for the study and advancement of Forensic Medicine will also be formed during the next few weeks. A number of prominent names both in law and medicine has been secured; and the association will be instituted under very favorable auspices.

Correspondence.

SALT ON STREET RAILWAYS; ITS MEDICO-LEGAL ASPECTS.

MR. EDITOR, — Having been asked some time ago by the presidents of some of the Boston horse-railway companies to make investigations as to the hygienic effect of sprinkling salt on tracks covered with snow or ice, I feel impelled, now that the subject has been brought before the medical public, to present the position of these corporations, whose servants, by the anomalous action of the Boston Board of Health, are now being subjected to petty prosecution, with risk of imprisonment when detected, in performing an act against which there is a total absence of trustworthy authority or facts establishing any prejudicial effects either upon the health of the public or of animals. The position thus taken by this sanitary body not only exposes it to unfavorable criticism from physicians, but

tends to weaken confidence in its judgment on the part of those in whose favor it is supposed to act, namely, the fair-minded public. Johnson somewhere says, when discoursing upon physicians, that when people see a man absurd in what they understand, it is not unnatural or unreasonable that they should be distrustful of him in what they do not understand.

This comparatively trivial subject is not beyond the comprehension of the laity, who will not long suffer unnecessary interference with whatever contributes to its convenience; nor should the protests of a minority, who may suffer from wet feet inadequately protected, nor even of those whose heavy teams are liable to become stuck upon the bare tracks, be allowed to hamper the efforts of the railway companies, who spare no expense in the work of clearing tracks and removing snow from the streets, and who should not be liable to official annoyance on grounds not fully established.

When so much undisputed sanitary reform demands their attention, local boards should surely confine their attacks to nuisances plainly, unquestionably, and substantially injurious to the public health; and should not allow themselves to enact, in opposition to the highest authorities, an arbitrary ordinance against a merely hypothetical evil; but such an ordinance having been thus passed, it follows that under this pseudo-sanitary code the Board of Health, as is naïvely said by a correspondent (in the JOURNAL of the 17th inst.), "have not found it difficult to furnish the necessary evidence to convict the violators of the salt order." It is possible that his confidence in equal success in the future may prove unfounded, should the railway authorities deem it advisable to carry the question to a higher tribunal for decision on its merits. That such an appeal has not hitherto been made is solely in order to avoid a conflict with a Board which has in the main decided wisely and for the public good.

There is nothing new to advance on this subject, which has been thoroughly and frequently investigated both in this country and in England. The indisputable facts are, that the weight of trustworthy evidence is overwhelmingly in favor of this use of salt under proper restrictions, *as a sanitary measure*. The writer who (in the JOURNAL of January 17th) says that he had supposed "that the mingling of salt and snow produced an intensely cold and corrosive mixture, which not only must be directly injurious and uncomfortable to the feet of horses," etc., furnishes a fair instance of the dogmatic and unsupported assertions which have given rise to the erroneous impressions by which the Board of Health seems to be influenced.

Salt under no circumstances is capable of producing a *corrosive* effect upon animal textures, nor can it be absorbed by the unbroken skin, and it is only slightly irritant to the mucous membrane or to abraded surfaces. Were the reverse true, the first to suffer from this fact would be the horse-railway companies, whose horses are constantly exposed in full force to whatever danger might exist; but, on the other hand, at their annual meeting, held in Chicago, October, 1883, the combined testimony, based on extensive personal observations, affirmed that no evil effects whatsoever have been detected in consequence of the distribution on the tracks of salt, which, on the contrary, from its astringent, cleansing effects, constitutes, in the form of salt baths, one of the best applications for the relief of "scratches" and other inflammatory affections to which horses' feet are liable.

And yet it must be admitted that this practice is open to abuse, as was shown by a somewhat unfortunate experiment tried in this city some years ago in the use of refuse salt which had served in packing hides or fish. The result was, that after the salt was washed away there remained a putrefying animal substance, offensive to sight and smell, and capable of producing mischief when brought in contact with an open crevice or wound in a horse's hoof. An obvious nuisance was herein promptly recognized, and the assurance given that the offense would not be repeated. Another and a frequent source of trouble is due to the failure on the part of the city authorities to keep clear the crossings, gutters, and entrances to the sewers, thus causing an unnecessary accumulation of water, which may form pools of considerable extent along the tracks; but for this delinquency the railway companies should in no way be held responsible, having, as in the past month, urgently protested against it, and done all in their power to remedy it. When, however, an opportunity is afforded for the mixture of salt and snow to run off, it disappears more rapidly than pure melting snow, thus flushing the sewers with a saline disinfectant which has been recommended in England as an efficient sanitary measure in case of epidemics.

The snow and ice having accumulated in large quantities, it is inevitable that there shall follow a season of slush and standing water, which may *per se* affect injuriously men and animals forced to wade through it; and it would seem almost superfluous to suggest from a hygienic stand-point that a process which curtails this disagreeable period is a beneficial one. Moreover, in the weak solution formed by the combination of snow or ice with salt in the proportion commonly found on or near the tracks, the result of experiments has shown a reduction in temperature of from 1° F. to 5° F. only; and this depression is but temporary, continuing merely while the snow is actually melting.

Again, as a matter of fact, it cannot be gainsaid that it is indispensable to public safety that salt mixed with gravel in sufficient quantity to dissolve the thin film of ice which forms recurrently on the steel rails be used to prevent the slipping of the car at such times, the force of the brakes being insufficient to control it on a downward grade when the wheels no longer revolve. Without this precaution, in itself a violation of the present ordinance, the cars may not be safely run for a single day over tracks thus coated; and through its neglect severe accidents have already occurred, for which the companies have been held liable. The *London Sanitary Record* goes so far as to advise the distribution of a moderate admixture of rough salt with water from ordinary watering-carts over all main thoroughfares covered with ice and snow, in order to facilitate traveling and lessen damage and suffering to horses; maintaining that the conducting power of the earth and the absorption of heat from neighboring objects prevents such a solution when not confined within an inclosed space from materially lowering the temperature of the surrounding atmosphere. This view is fully sustained by Prof. R. E. Rogers, M. D., of Philadelphia, who experimentally demonstrated that at an elevation of three feet above the ground the atmosphere is not rendered perceptibly colder by the use of salt.

Much more literature on this subject might be quoted in favor of the railway officials, who feel that their position is still further strengthened by the sup-

port of the best sanitary authorities in this vicinity (outside the City Board); but space permits only the following from an editorial in the *London Sanitary Record:* "We have always supported this proceeding (salting the roads in winter), the alleged scientific medical reasons against it being mere superficial, half-informed twaddle. . . . To salt the snow and dissolve it, and then sweep it down the drains, is the only natural and economical way of dealing with it."

ARTHUR H. NICHOLS, M. D.

ROXBURY, *January* 21, 1884.

"SALTED TRACKS."

MR. EDITOR, — It is a satisfaction to have it from highest authority that "Boards of Health and others who have considered the matter prefer the salt water for streets in summer on account of being cheaper than fresh water, doing better service, and being a good antiseptic." We had so argued long ago. Now that it is settled there need be no further discussion or doubt on that point, and the practice may continue without let or hindrance.

It is also satisfactory to have it from the same authority that "the salt and snow or ice make a freezing-mixture in which no one can long stand or walk with ordinary protection without loss of comfort or danger to his health." This, then, is the whole of it, — to "long stand or walk" on "salted car tracks?" But why do it? Why not take to the sidewalks, which are presumably freed from snow and ice, or otherwise protected? No one is obliged to stand or to walk long *in the street* on salted or clean car tracks. Avoid so doing; and, according to S. H. D., inferentially, health is not compromised.

At last Boards of Health "prefer the salt water for streets." Possibly (stranger things have happened) it may not be long before objections may cease to "salted tracks" on the score of public health; when, under efficient city government, crossings may be properly cleared, and "ponds of salted slush" quickly cared for, while those long standing, at the risk of health or comfort, in such unsafe places are gently told to "move on."

The foregoing is all that is fairly deducible from the varied comments on our previous question, which remains as yet unanswered. Really, the case appears much weaker than anticipated. The premises adduced do not warrant the conclusions, and juries which convict on such "evidence" must be swayed by prejudice or misapprehension. On the point raised the writer finds himself still uninformed and as much as ever

NESCIENS.

BOSTON, *January* 19*th*.

AN EXTEMPORIZED ICE-BAG.

MR. EDITOR, — Having occasion a few days ago to make use of an ice-bag, and nothing of the sort being obtainable, the wits of the family were set to work to find a substitute. The result of these cogitations was the suggestion of an expedient which, though ridiculously simple, is so thoroughly practical that I make no apology for asking you to mention it in the JOURNAL. The credit of the suggestion is due a young lady in the family, who brought me a rubber gossamer cloak and asked if I could not use the hood. This was immediately filled with snow, and did as good service as if it had been made for the purpose.

Very truly yours, R. A. KINGMAN, M. D.

BOSTON, *January* 18, 1884.

Miscellany.

MORTALITY STATISTICS OF PROVIDENCE, R. I., FOR THE YEAR 1883.

FROM the report of deaths during the year 1883 by the City Registrar of Providence we take the following figures: Two thousand three hundred and twenty-eight (2328) persons died in Providence during the year 1883. This number was eighty-six more than in the previous year, or an increase of 3.83 per cent. The increase of population in the same period was 4.39 per cent. The 2328 deaths in 1883 represent an annual rate of mortality of 19.50 in each 1000 of the 119,405 inhabitants of the city. The rate in 1882 was 19.60 in each 1000.

Ages. There were 666 decedents under five years of age in 1883, or 28.60 per cent. of all. The number and percentage of decedents under five years of age in each of the last four years have been as follows: —

	1883.	1882.	1881.	1880.
Number under five years of age .	666	678	727	731
Percentage	28.60	30.24	33.89	35.14

The number and percentage have been growing less in each of the last four years.

Between twenty and fifty years of age there were 698 decedents in 1883 and 718 in 1882; between fifty and seventy years there were 429 in 1883 and 351 in 1882; and of seventy years and over there were 330, or 14.17 per cent., in 1883, and 286, or 12.75 per cent. in 1882.

PUBLIC PROSECUTORS AND PRIVATE PERSECUTORS.

OUR English brethren are, with reason, considerably stirred up over some recent suits which have been brought against two surgeons, Messrs. Bower and Keates, by the father of a child on whom tracheotomy had been performed by the defendants in diphtheria to avert impending asphyxia. At a meeting held at the residence of Sir Wm. Jenner Dr. Moxon detailed the circumstances as follows: —

"It appeared that two suits had been brought against the unfortunate gentlemen; one a civil action, brought by the father of the child to recover damages from Messrs. Bower and Keates because he had been instructed by them, after the operation of tracheotomy had been performed, to suck the tube, which had become obstructed, and thereby to save the life of his own child. The father subsequently had some slight throat affection, which, it was thought, was probably of a diphtheritic nature, though it was certainly not severe diphtheria; and it was to recover damages for this that he brought the action. The first trial terminated by the disagreement of the jury. A new action had been commenced, and this part of the matter was therefore *sub judice*, and could not be discussed at present. After the failure of the civil action, although it had been given in evidence in the course of the trial

that the parents had no complaint to make concerning the treatment of the child, and, indeed, were completely satisfied therewith, the mother proceeded to swear an allegation at the Lambeth Police Court, stating that the treatment of the child had been improper, and charging its medical attendants with manslaughter. This charge was taken up by the Public Prosecutor, who conducted the action on behalf of the Crown. It might appear scarcely credible that this high public functionary felt justified in undertaking the criminal prosecution of these gentlemen for the manslaughter of their patient without one atom of medical evidence before him in support of the charge. The result of the examination of the defendants before the magistrate was the dismissal of the charge immediately after the cross-examination of the medical witness summoned on behalf of the prosecution, — the magistrate remarking that this was a case of 'persecution,' not prosecution."

The especial point of complaint made by the profession was that the Public Prosecutor should have lent the authority of his position to the complainants without having investigated the validity of the grounds on which the action was based. A resolution was offered at this meeting by Sir James Paget, and seconded by Dr. Wilson Fox, "That the Council of the Royal College of Physicians and the Council of the Royal College of Surgeons be requested to consider the propriety of representing to the Secretary of State for the Home Department that it is very desirable that there should be some arrangement by which the Public Prosecutor may obtain the assistance of skilled advisers when he is solicited to institute prosecutions of medical practitioners."

Subscriptions to defray the heavy legal expenses of the defendants were made to the amount of £200 at the meeting, and it was proposed that the amount of individual subscription be limited, so that the whole profession might have an opportunity to express their sympathy with the defendants in a persecution to which any medical man was liable to fall a victim. We learn that these contributions have been very liberal, already amounting to more than the legal expenses of the accused.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 12, 1884.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	597	204	15.20	16.86	6.68	4.24	2.17
Philadelphia	846,984	393	142	16.51	10.92	3.05	7.40	4.32
Brooklyn	566,689	274	92	17.64	18.00	.72	6.44	1.80
Chicago	503,304	200	93	26.00	15.50	7.50	8.00	5.00
Boston	362,535	175	59	19.95	19.34	1.14	10.26	2.28
St. Louis	350,522	174	72	22.96	21.28	1.12	14.00	2.80
Baltimore	332,190	190	75	23.44	10.07	1.06	7.42	1.56
Cincinnati	255,708	115	37	12.18	19.14	3.48	5.22	—
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	93	34	21.80	9.72	3.24	2.16	2.16
Pittsburg (1883)	175,000	61	16	8.20	26.24	—	4.92	3.28
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	53	29	22.68	11.34	—	7.56	7.56
Providence (1883)	116,755	55	10	12.74	14.56	7.68	1.82	1.82
New Haven (1883)	73,000	18	3	27.77	—	5.55	16.66	—
Charleston	49,999	—	—	—	—	—	—	—
Nashville	43,461	25	6	16.00	12.00	4.00	8.00	—
Lowell	59,485	26	7	19.25	3.85	—	11.55	—
Worcester	58,295	18	5	22.22	5.55	5.55	5.55	5.55
Cambridge	52,740	9	0	44.44	11.11	22.22	—	11.11
Fall River	49,006	20	6	4.00	28.00	—	4.00	—
Lawrence	39,178	15	6	6.66	—	—	—	6.66
Lynn	38,284	18	2	5.55	11.11	—	5.55	—
Springfield	33,340	10	2	10.00	10.00	—	—	—
Salem	27,598	10	1	10.00	20.00	—	—	—
New Bedford	26,875	7	1	—	14.28	—	—	—
Somerville	24,985	7	0	—	14.28	—	—	—
Holyoke	21,851	—	—	—	—	—	—	—
Chelsea	21,785	4	1	25.00	25.00	—	—	—
Taunton	21,213	5	2	—	—	—	—	—
Gloucester	19,329	4	2	—	—	—	—	—
Haverhill	18,475	5	2	—	20.00	—	—	—
Newton	16,995	5	0	40.00	40.00	20.00	—	20 00
Brockton	13,608	4	3	—	—	—	—	—
Newburyport	13,537	6	0	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	3	1	—	—	—	—	—
Seventy-one Massachusetts towns	281,805	94	28	13.84	—	1.06	6.39	3.19

Deaths reported 2693 (no reports from New Orleans, Buffalo, and Charleston): under five years of age, 950: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 472, lung diseases 434, consumption 380, diphtheria and croup 179, scarlet fever 73, typhoid fever 57, diarrhœal diseases 39, measles 48, malarial fever 26, whooping-cough 18, cerebro-spinal meningitis 17, erysipelas 16, puerperal fever 13, small-pox one. From

measles, Baltimore 15, Brooklyn 12, District of Columbia 11, New York seven, Philadelphia three. From *diarrhœal diseases*, New York 13, Brooklyn nine, Boston six, Baltimore three, Chicago two, Cincinnati, District of Columbia, Milwaukee, Nashville, Cambridge, and Springfield one each. From *malarial fever*, New York nine, Baltimore five, St. Louis three, Brooklyn two, Chicago and Cincinnati one each. From *whooping-cough*, New York and Baltimore five each, Chicago and St. Louis two each, Brooklyn, Boston, Salem, and Chelsea one each. From *cerebro-spinal meningitis*, NewYork six, Philadelphia three, Chicago and Boston two each, District of Columbia, Milwaukee, Lowell, and Worcester one each. From *erysipelas*, New York five, St. Louis three, Chicago two, Boston, Baltimore, Providence, Lowell, Merrimac, and Wrentham one each. From *puerperal fever*, New York three, Chicago, Cincinnati, and Milwaukee two each, Boston, St. Louis, New Haven, and Weymouth one each. From *small-pox*, Philadelphia one.

Thirteen cases of small-pox were reported in St. Louis, Cincinnati one; scarlet fever 50, diphtheria 36, typhoid fever five, and measles one in Boston; scarlet fever 12, and diphtheria in Milwaukee.

In 90 cities and towns of Massachusetts, with an estimated population of 1,284,384 (estimated population of the State 1,922,530), the total death-rate for the week was 17.41 against 18.00 and 21.05 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending December 29th, the death-rate was 20.6. Deaths reported 3397: acute diseases of the respiratory organs (London) 355, measles 109, scarlet fever 104, whooping-cough 80, fever 55, diarrhœa 23, small-pox (Birmingham and Liverpool four each, London two, Sunderland one) 11. The death-rates ranged from 15.5 in Bradford to 25.8 in Newcastle-on-Tyne; Bristol 17.2; Plymouth 17.4; Birmingham 18.4; London 19.8; Sheffield 20.7; Nottingham 21.7; Birkenhead 22.4; Leeds 23.2; Liverpool 24.9; Blackburn 25; Manchester 25.4. In Edinburgh 19.5; Glasgow 24.3; Dublin 27.5.

For the week ending December 22d, in 155 German cities and towns, with an estimated population of 8,091,113, the death-rate was 23. Deaths reported 3577; under five years of age, 1120; consumption 511, lung diseases 377, diphtheria and croup 273, whooping-cough 67, scarlet fever 60, typhoid fever 55, measles and rötheln 54, puerperal fever 31, small-pox (Danzig one) one, typhus fever (Breslau one) one. The death-rates ranged from 12 in Karlsruhe to 38 in Königsberg; Breslau 28.2; Munich 28.2; Dresden 26.5; Berlin 20.9; Hamburg 21.8; Cologne 24.5 Frankfort a. M. 17.8.

For the week ending December 29th, in the Swiss towns, there were 26 deaths from consumption, lung diseases 24, diarrhœal diseases 16, diphtheria and croup eight, scarlet fever six, whooping cough two, erysipelas two, small-pox (Basle two) two, typhoid fever one. The death-rates were, at Geneva 13.3; Zurich 16; Basle 19.3; Berne 29.4.

The meteorological record for the week ending January 12th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Jan., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 6	30.076	8	15	0	68	47	67	61	W	W	W	11	12	14	C	C	C	—	—
Mon., 7	30.555	13	21	4	63	40	61	55	W	NW	NW	7	12	7	C	C	F	—	—
Tues., 8	30.422	24	35	7	70	73	94	79	NW	NE	SE	4	12	25	C	O	O	—	—
Wed., 9	29.348	39	52	30	100	71	57	76	SE	SW	W	36	22	21	R	O	O	—	—
Thurs., 10	29.911	29	34	25	64	50	69	61	W	W	SW	18	22	9	C	C	O	—	—
Fri., 11	29.884	36	42	29	91	89	68	83	SW	SW	W	12	12	12	C	R	C	—	—
Sat., 12	29.989	17	33	13	74	84	67	75	NW	NW	NW	12	13	10	C	S	O	—	—
Mean, the Week.	30.026	24	33	15				70										35.35	2.28

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening; W., sleet.

APPOINTMENTS. — Dr. William E. Boardman has been elected Visiting Physician of the Boston Lying-In Hospital in place of Dr. A. D. Sinclair, who has resigned, and been elected one of the Consulting Physicians.

Dr. C. M. Green has been elected Assistant Physician.

Dr. Philip C. Knapp, Jr., M. D., has been appointed interne at the Boston Lunatic Hospital for a period of six months.

BOOKS AND PAMPHLETS RECEIVED. — Elements of Physiology. By Henry Power, M. B. Lond., F. R. C. S., etc., etc. Illustrated with Forty-seven Engravings. Philadelphia: Henry C. Lea's Son & Co. 1884.

Lister's System of Aseptic Wound-Treatment versus its Modifications. By B. A. Watson, A. M., M. D., Surgeon to the Jersey City Charity and St. Francis Hospitals, Jersey City, New Jersey. Extracted from the Transactions of the American Surgical Association, Vol. I., 1884.

On Sterility in Woman. Being the Gulstonian Lectures delivered in the Royal College of Physicians in February, 1883. By J. Matthews Duncan, M. D., LL. D., etc., etc. Philadelphia: P. Blakiston, Son & Co. 1884.

The Diagnosis of Diseases of the Spinal Cord. By W. R. Gowers, M. D., F. R. C. P., etc. Third Edition. Philadelphia: P. Blakiston, Son & Co. 1884.

The New York Post-Graduate Medical School, 213 and 215 East Twenty-Third Street, New York. Sessions of 1883–1884.

Quarantine. By Walter Wyman, A. M., M. D., Surgeon U. S. Marine Hospital Service. Read before the Maryland Sanitary Convention.

Die epidemische Verbreitung des Scharlachfiebers in Norwegen. Von Dr. Axel Johannessen. Kristiana. 1884.

Introductory Address delivered before the Medical Class of Dartmouth College, August 1, 1883. By Louis Elsberg, A. M., M. D., Professor of Laryngology.

Quarterly Compendium of Medical Science. A Synopsis of the American and Foreign Literature of Medicine, Surgery, and Collateral Sciences. Edited by D. G. Brinton, M. D., and Joseph Edwards, M. D., Bound volume. 1883. Philadelphia: Medical Publication Office.

Woman's Work in the Field of Medicine. College of Midwifery of the City of New York.

Fourteenth Annual Report of the Manhattan Eye and Ear Hospital, New York, October 15, 1882, to October 15, 1883.

The Australasian Medical Directory and Handbook. Edited and compiled by Ludwig Bruck. First Year of Publication. Sidney. 1883.

Fat and Blood. An Essay on the Treatment of Certain Forms of Neurasthenia and Hysteria. By S. Weir Mitchell, M. D. Third Edition, Revised with Additions. Philadelphia: J. B. Lippincott & Co. 1884.

Hysteria. A Study in Psychology. By James Hendrie Lloyd, A. M., M. D., Instructor in Electro-Therapeutics, University of Pennsylvania. (Reprint.) 1883.

Some Recent Progress in Diseases of the Nervous System. By Talbot Jones, M. D., St. Paul, Minn. (Reprint.)

Original Articles.

TWO CASES OF INJURY TO THE BACK.[1]

BY CHARLES F. FOLSOM, M. D.,

Physician to Out-Patients with Diseases of the Nervous System, Boston City Hospital.

Among the cases in my note-books I find quite a considerable number where injuries, especially falls, producing quite severe blows upon the back alone, upon the head, or upon the back and head together, have been the apparent cause of grave symptoms, involving the mind or the general nervous system, or both. I find that the gravity of the resulting disease does not depend upon the severity of the primary injury, nor upon the intensity of the pain and other indications of mischief immediately following. The character of the disorder, whether spinal, cerebral, or general, has not in these cases depended upon the locality of the original disturbance, whether of the head or of the back. Of two cases of delusional mental disease, one, which resulted in recovery, was, I think, the direct outcome of a fall in a skating-rink, whereby the back of the head received a sharp blow not causing even momentary unconsciousness. The second was slowly developed through slight mental confusion, irritability, hardly distinguishable change of character, suspicion, jealousy, and fear of personal injury into delusional mental disease, remaining now, in the fifth year, an incurable insanity, which originated in a succession of violent blows to the back, but no injury to the head, from falling down stairs.

A large number of cases of epilepsy and a few cases of general paralysis of the insane were thought to have been the direct consequence of blows or other injuries, for the most part of the head, but to a less extent of the back. Chorea, too, and the group of symptoms classed under the head of spinal irritation, neurasthenia, and now and then hebephrenia, had their origin associated with the same immediate cause.

I learn from the notes that in the majority of cases in the individuals in whom concussion (not using the word in its technical sense) of the brain or spinal cord, or both, in my judgment, produced symptoms which would be commonly called mental or nervous, there was a hereditary predisposition to the neuroses or psychoneuroses, or that there was a developed instability of the nervous organization; but that fact does not by any means universally hold true. There is a vast preponderance of females over males, but the most difficult case to care for, and the longest to get well under what I thought to be judicious treatment from the beginning, was in a strong, able-bodied, intelligent man, who had been vigorous enough to frustrate an attempt to garotte him, but who, in the process, fell backwards, striking his head, neck, and shoulders on not very hard ground. This man had the greatest variety of manifestations of general disorder which I have ever seen classed under the heads of hysteria, railway spine, etc., and he was two years in regaining sufficient health to go to work, although he had the stimulus of the necessities of his wife and children to make him do so, and although any possible litigation upon the subject was so early decided that there was every inducement to him to recover. His cure has seemed a thorough one for now over a year. I have been long convinced that many of these patients were suffering quite as much from disease affecting the brain as from anything which could with propriety be named hysterical, or spinal, or nervous, and many of them wholly from such disease.

The cases which I shall report to-night are two, in which quite similar injuries, producing nearly identical primary indications, resulted in widely different pathological conditions calling for directly opposite methods of treatment.

Miss ——, sixteen years old, a bright, very large, robust looking girl, brought up in a country town, came to me with her sister, giving the following history: She belonged to a family in which there were several members considered nervous, but in which no case of the neuroses or psychoses had appeared. She had never had any severe illness, and had always been healthy and strong until three months previous to consulting me, when she fell very heavily, striking her back on a level with the upper lumbar vertebra. She became somewhat dizzy, but not strikingly so, although feeling weaker than usual for a few days. The pain was disagreeable, and increased by moving about much, so that she was compelled to keep quiet for several weeks. After that time she was told that she had spinal disease, and her parents were informed that she must be treated as an invalid the rest of her life, the tenderness and pain at the seat of the injury still persisting. She was told that she must lie down much of the time, but that she might come to Boston to attend school, provided she did not walk or stand or study very much. I ascertained that the lungs, heart, and kidneys were free from evidence of disease. The patient began to menstruate in her fourteenth year, and the function had gone on without any indication for interference. The appetite was moderate. Digestion was well performed, barring an habitual constipation, which was readily overcome by careful regulation of food and habits. There were absolutely no indications of disordered function, except the pain and tenderness already referred to, a sense of weariness, and backache for the greater part of the day, a slight loss of flesh, and a progressively increasing loss of strength. The patient's sister had been directed not to allow her to sit long, to dance at all, to walk more than a very little, or to take part in the usual gymnastic exercises of the school. In fact, she was in the process of being trained to become an invalid of the neurasthenic type.

After the usual examination I felt satisfied that there was no real injury to the spine or brain, that there had been only a bruise, and that the treatment called for was not unlike that found most successful in a sprained ankle, when the acute symptoms had gone by. The sister was directed to follow out a course of treatment of which this is the outline: —

A dash of cold water the whole length of the spine, followed directly by a sponge bath every morning. General massage once a week, and rubbing of the muscles of the back, shoulders, and abdomen every evening. To begin gymnastics with a view to strengthening and giving tone to the muscles supporting the weight of her heavy body at the end of a week, and in two weeks to take up dancing, at first very moderately. She was to practice at the piano, of which she was fond, a half hour each day, with a full support to her back, and she was to lie down for half an hour fifteen minutes after her back began to ache, but never to continue work with an aching back.

[1] Read before the Boston Society for Medical Improvement, January 14, 1884.

The sister was directed to inform me as to the progress of the treatment, the inmates of the house were recommended to look upon the young girl as in no way an invalid, and the patient was told not to come and see me again for a month, thereby getting additional assurance from my statement that there was no serious trouble with her. In a little over three months she has become quite well, she walks, dances, and seems quite like the other girls in the school.

The second case belongs to a class much more difficult to deal with.

Miss ——, aged twenty-six, an intelligent, healthy-looking, high-school taught Irish American, with a comfortable home in one of the suburbs, where she kept house for her father and sister. She did not know of any mental or nervous disorder or any so-called nervousness in any of the branches of her family. She has been told that at the age of six or seven years she had pleurisy, and when fourteen slow fever. Otherwise she has been quite well and strong, and the picture of physical health. She began to menstruate at the age of fourteen, and has from the beginning suffered from intense dysmenorrhœa. During the previous winter she had been up late and early, and her sisters thought that she had been overworking. She was not herself conscious of any weariness or feeling of effort. Her mind had been quite at rest. She had no anxiety, and had not lost flesh, and she was quite contented with her lot in life. She seemed to me exceptionally fortunate as regards the complicated circumstances combining to affect her general health. Last February she fell, striking her sacrum on the ice. The pain and discomfort from the blow were not great, so that she walked home and did not find it necessary to in any way diminish the labor of her daily life. For three weeks there was decided tenderness when lying on her back, and only slight pain at other times, which then disappeared. She noticed, however, that her daily work wearied her, and so she had walked out less than usual. Four weeks after the accident, in trying to walk a distance to which she had formerly been accustomed, she remarked a dull ache through the right thigh with decided weakness, and finally difficulty in walking. This symptom remained without abatement until August, when attempting to walk, the weakness of the leg rather increasing than diminishing, so that she then went to the sea-shore for a fortnight without benefit. Upon her return the leg began to ache in its whole length if used, so that she walked about only a little, and sat sewing much of the time. Then the arm began to ache and to feel weak. There was also about the same time a steady uncomfortable feeling in the head, always disagreeable, never severe.

She came to the out-patient department of the City Hospital September 19th, asking for the room for the treatment of nervous diseases. She was well formed, healthy looking. Her father had taken her to the horse-cars, and she found great difficulty in getting from Washington Street to the hospital, a distance of, perhaps, three hundred yards. The heart, lungs, and kidneys were ascertained to be healthy; the appetite was fair; bowels constipated; and there had been a slow but progressing loss of flesh, in all amounting to about five pounds. She slept poorly. There was a constant feeling as if the brain had been bruised, which was not much increased by mental effort, but any work requiring thought or planning produced a sense of general fatigue over the whole body. The emotional state was much exalted. The patient could not sit long in the waiting-room without excessive fatigue and great increase in the pain affecting the extremities. She thought her mind was weakened, as she could not bear things at home with her customary equanimity. I could not find anything abnormal from an examination of the head, ears, or eyes. The ophthalmoscope was not used. The patient complained of a great ache, rather than pain, throughout the right arm and leg, and in the right side of the chest. The whole fore-arm sometimes felt as if encased in ice. A severe pain appeared at different times in different spots of the upper arm and thigh, and there was a feeling of numbness at the seat of the injury, sometimes very troublesome, oftener hardly noticeable. Between the shoulders, over a space ten inches in diameter, quite nearly symmetrical, and involving both sides, was an area of burning-heat sensation, varying in intensity under conditions for which I could not find any approach to a law. Sensation was slightly impaired pretty much throughout the right side, but there was at no time any marked anæsthesia. The arm could scarcely be used in any of the ordinary duties of life, and the leg was exhausted after quite moderate efforts. There had been a sense of muscular spasm without any visible movement as observed by the patient in both legs, much less in the left, but also in the right arm.

In such a case as this healthy occupation and diversion for the mind are of the first importance, so that isolation and the rest cure were not to be thought of. A feeling of introspection and self-consciousness was particularly to be avoided, so that a hospital was distinctly contra-indicated on account of the danger of establishing a chronic invalidism. I saw no reason for removal from home except for convenience of treatment, and that could not be afforded, and yet the home was not a favorable place for the care of a sick person. I doubted whether massage would be of use, and my experience of other similar cases led me to question whether it might not do harm. At all events it was not procurable.

She was directed to walk only as much as was necessary to get to the hospital three times a week, her father driving her to the horse-cars; to use the arm only a couple of minutes at a time, at long intervals, and then for no fine movements. She was not to read or do anything involving mental effort except in a general way to direct her sister about the management of the house. She was to be taken out of herself as much as possible. From week to week she was allowed to gradually increase the amount of physical and mental work as she found she could bear it, and I soon ascertained that she was better those days when she came to the hospital than when she remained quietly at home. The faradic brush was used over the arm of a strength just beyond what could be comfortably borne for a month. At the end of a month's time all the most disagreeable symptoms in the arm had disappeared, and in a month more it was quite well except that it had still to be used carefully. The leg remained stationary, or, if anything, getting worse for a month, while the arm was improving, so that the patient was directed to apply the faradic brush to the whole length of the leg, since which time improvement has begun. With malt, cod-liver oil, and hypophosphite of lime four times a day the general condition improved, there was a slight but continuous gain in

flesh, the sleeplessness disappeared, and in a month and a half the uncomfortable feeling about the head had gone, to return only for a short time at considerable intervals. I dare say that the daily cold affusions to the back helped to improve the general condition, and had something to do with the rapid subsidence of the dyspnœa, panting breath, sensation of constriction about the chest, tightness about the heart, and paræsthesias. As soon as the head began to feel well iron was given, at first in very small doses, and later the acid phosphates and arsenic. The constipation has been regulated by diet and mild laxatives.

At the present time the mental state has returned to the normal. The arm is quite well but not fully strong, the head does not cause any trouble or uneasiness, the abnormal sensations have gone except the pain in the thigh, although that has improved, and the strength of the leg is constantly mending. I confidently expect a full cure within three to six months. But the element of time seems to me extremely important in these cases, and I think that careful treatment should be insisted upon for at least six months after apparent recovery, to enable the system to entirely regain its tone.

I know of no way in which the physician can form an opinion as to the extent of the damage done by injuries to the back and head except by reserving his prognosis for quite a time in order to see which set of symptoms appears. There probably will be a difference of opinion among equally qualified men with large opportunities for observation, as to the extent to which rest should form an important part of the immediate treatment of even seemingly trivial accidents causing a physical shock to the brain or the spine. Doubtless evil results happen less often than others. But serious trouble comes not seldom, and incurable, almost life-long, suffering is not uncommon in cases where there will always be at least a doubt whether sufficient care in the beginning might not have averted a tragedy. Whether in the first of these two cases the severe pain necessitated the rest which saved the young girl from the development of more serious disorder, and whether, in the second, the mildness of the initial symptoms encouraged the activity which prevented a speedy cure are questions of interest to the physician, and of importance to the patient. My own experience leads me to treat all similar cases with great caution from the beginning.

THE USE OF TOBACCO BY BOYS.[1]

BY EDWARD O. OTIS, M. D. (HARV.)

ONE might deem an apology almost necessary for adverting again to the trite subject of the use of tobacco, a subject which has been discussed almost from time immemorial, and of which so much true and false has been said. Still it is a fact that tobacco-using among boys is common, and, further, most medical men, I think, will admit that the use of tobacco by boys, either moderately or immoderately, is injurious. So long, then, as this is the state of things it may not be amiss to raise one's voice from time to time against the abuse. Although not much that is new upon the matter may be presented, every agitation against an evil does something towards eradicating it.

I propose to leave out entirely any discussion of the effects of tobacco, injurious or otherwise, upon adults, and refer only to its use by boys.

My attention was especially directed to this subject while in practice at Exeter, N. H., where I met with many of the students of the Phillips Exeter Academy, and noted the effect of tobacco upon them. I became still more interested by reading — through the kindness of the late principal, Dr. A. C. Perkins — a large number of letters sent by parents, teachers, and others in response to a circular letter of the principal asking their opinion regarding the use of tobacco by boys in the school. To the circular and letters I shall refer later on.

As to the exact percentage of boys who use tobacco there do not seem to be any very accurate statistics. At the academy above referred to I should say that at least one half of the students used it. The statement was made some time ago, I believe in a secular paper, that seventy-five per cent. of school-boys over twelve or thirteen years old smoke cigarettes. I am inclined to believe that this is too high. At the Boston Latin School, of those in the upper classes from fourteen to eighteen years of age, the head master stated last year that probably about half used tobacco to some extent. The principal of another school stated that since his connection with it the number of smokers had nearly doubled. This is enough to show that the evil prevails extensively, and gives good reason for serious apprehension.

Whatever injurious effects the excessive and constant use of the drug may have upon adults, these are more marked and intensified in the case of the youthful user of tobacco; and, moreover, the youth are more inclined to its use to excess, for theirs is an age of immoderation. For example, a young student, from fifteen to seventeen years of age, I should think, told me he was smoking about a bunch of cigarettes a day, and although promised a trip to Europe if he would abandon the habit, said he did not think he could do it even for that prize. It is a time of rapid change, physically and mentally, with them; there is a constant development going on, and although I am not aware that any careful series of observations have been made, still I am sure that the general observation of all is to the effect that tobacco interferes with and retards the proper symmetrical development both of mind and body. Of course there are exceptionally robust and strong boys who, although they use tobacco, mature into sturdy men with good minds, but it is in spite of the tobacco. The especial deleterious effects of tobacco upon the young are pretty well known from all the discussion and much exaggeration that has been rife about them. I will briefly mention some of them.

There is the so-called "tobacco heart," an irregular, irritable heart. Dr. Gihon, in his report on the United States Naval Academy, says, "The annual examination of cadets reveals a large number of irritable hearts among the boys who had no such trouble when they entered the school." This was before tobacco was prohibited at that institution.

Another effect is defective muscular coördination, as shown in the tremulousness of the hand in manipulating a pencil or pen, and inability to draw a perfectly straight line. The professor of drawing at the Naval Academy said that he could invariably recognize a

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, December 12, 1883.

user of tobacco from this inability. I myself observed the same thing in the case of a young man who smoked continually.

Besides impeding mental growth it is an obstacle to mental application and effort. It is said to produce progressive deterioration of the intellect, and to impair its integrity. At the instance of Napoleon III. a commission was appointed to examine the young men in the government training schools of France as to the effect of tobacco upon them. The students were divided into two classes, the smokers and non-smokers. The former were found so inferior, physically, mentally, and morally, that the use of tobacco was prohibited in all the schools under governmental supervision. In the École Polytechnique it was found that the non-smokers took the highest rank in every grade, and that the smokers continually lost grade.

The principal of a boy's school near Boston stated that the habit of smoking was more prevalent in the lower classes than in the upper, the reason being that the smokers were usually the poorest scholars, and were gradually weeded out as the class advanced in the school. In one of the letters above referred to the writer says: "If a successful salesman to whom I was paying a high salary should begin the use of tobacco, I should feel that about fifteen per cent. of his vitality or ability was taken from his usefulness, and hence should be taken from his salary."

It is said to impair the memory. In another one of these letters, the writer somewhat graphically relates the effect of tobacco upon his memory, as follows: "I commenced the use of tobacco when thirteen years old, both smoking and chewing. I went to school but could not study, had no ambition at all to learn anything, and it was almost as well not to learn, since I could hardly remember anything from one school to the next. . . . The most lasting injury is the fact that tobacco ruined my memory, which does not come back to me, although I have not used tobacco for fifteen years." Another writer says that there is a young man in his factory twenty-one years old, powerfully built, and weighing one hundred and eighty pounds, brought up on a farm, who uses tobacco. Years ago he noticed a loss of memory, and a diminution of vitality generally.

It is a well-known fact that tobacco may cause defective vision. Dr. Gihon in the report above referred to says: "I have myself several times rejected candidates for admission into the academy on account of defective vision, who confessed to the premature use of tobacco, one of those from the age of seven." I have noticed that the mechanical irritation of the smoke, especially from cigarettes, which bring it so near the eyes, will produce and keep up catarrhal trouble. I have a suspicion that tobacco used as the boy is emerging from boyhood into manhood causes an undue irritation and excitability of the sexual system, prompting to abuse and excesses.

Then there is the irritation of the mucous membrane of the mouth and throat, impairment of digestion, sometimes, an habitual sense of uneasiness, palpitation, hypochondriasis.

With regard to cigarette smoking by boys, I will refer to two paragraphs from an editorial on the use of tobacco in the *Boston Medical and Surgical Journal* for November 23, 1882: "The number of young men who smoke cigarettes is almost startling. It is not only students but even school-boys in their teens who vigorously and openly indulge in this dangerous habit." And again: "The dangers, then, which are incident to cigarette smoking are, first, the early age at which it is taken up; second, the liability to excess; and third, the bad custom of inhaling the smoke. These are dangers superadded to those attendant on the ordinary use of tobacco, and should be carefully considered by all medical men."

Dr. Witter, of Grand Rapids, Wis., in a paper in the Report of the State Board of Health of Wisconsin for 1881, among the conclusions which he deduces from a large number of letters written on the subject by physicians of the State, says: "That beginning the use of tobacco in early life cannot be too strongly condemned as producing most pernicious effects upon the constitution of the young, and as impairing greatly, if not wholly destroying, the chances of success as students and scholars."

The evil effects, then, of tobacco upon boys which can be said to have been fairly proved by observation, are: —

First. An interference with and impairment of the general development, physically and mentally. Probably it does this by retarding progressive cell change, and impairing nutrition. In an adult the development is attained, consequently he can smoke with impunity so far as this effect is concerned, when the boy only does it with injury.

Second. The tobacco heart. This likewise happens to the adult, but is, I should think, more likely to happen to the youth, and with graver result, because his is such an unstable age physically. For this same reason the other injurious effects are more liable to be intensified in the youth.

Third. Defective muscular coördination. I have but little proof to show that this condition is more than temporary, continuing only while the tobacco is used.

Fourth. It reduces the intellectual power of the boy. It does this either by opposing mental application and effort, or else by producing deterioration of the intellect, probably both to a greater or less extent.

Fifth. It impairs the memory. What proof I have adduced seems to show that this is a permanent injury.

Sixth. It may cause defective vision, and also irritation, more or less chronic, to the external parts of the eye.

Seventh. It may unduly excite the sexual system and lead on to excesses. I have no positive proof of this, but my observation among boys rather points to it.

Eighth. Irritation of the mucous membranes of the mouth and throat, more especially in case of cigarette smoking.

Ninth. It may impair digestion, and produce other derangements, such as habitual uneasiness, hypochondriasis, and so on.

One cannot reason as to the effect of tobacco upon boys from its effect or lack of effect upon the mature man. The conditions are different. It would be quite as reasonable to say that, because to a sick man a certain drug is administered with good effect, the same drug may be administered to a well man with no evil effect.

If what I have said is true or approximately true, it would seem eminently wise to do what we can to keep tobacco from boys. It is a pity to allow them unwittingly to do that which may prevent their highest development physically, mentally, and morally. It is the physician's duty to expose the danger and warn parents and teachers. The latter must use their influ-

ence and authority both by persuasion and restriction. In schools, after the case has been fairly presented to the boys, I believe absolute prohibition should be enforced with all the rigor of the school authorities. I know of no greater aid to effectually bringing about this result than a good gymnasium with a competent medical director.

I am fully aware with our large freedom how many difficulties there are in the way of prohibition, but still I believe it would lead to better results than any other method, and reduce the evil to a minimum.

You cannot reason with boys, as a rule, on the matter. If you present to them all the future evils which may accrue to them from its use, that their chances of future success are so much lessened, that they may be laying up for themselves ill health, shattered nerves, and an impaired mind, they may assent to it all, and then the next moment forget it, so little do they regard the future.

What was done at the military and naval academies when the evil was appreciated, the following notes to the principal of the Phillips Exeter Academy will show:—

I. U. S. Naval Academy, Annapolis, Md., *May* 20, 1882.

Sir,—I beg to acknowledge the receipt of your letter of the 18th inst., and in reply to inform you that the use of tobacco in every form is prohibited to students of this institution.

Very respectfully, ——, Supt.

II. Headquarters U. S. Military Academy, West Point, N. Y., *May* 18, 1882.

Sir,—The officers in immediate charge of the cadets were unanimously of the opinion that the use of tobacco worked great injury, and the Academic Board was practically a unit in favor of its prohibition.

Very respectfully, your obedient servant,

——, Adjutant.

The president of one of our colleges says: "We have required our students to abstain from the use of tobacco since the founding of the college, now almost fifty years. My impression is that we would sooner lose half of our students than dispense with the rule. We never have any objection to the rule from pupils or their parents. All believe in it, but every year we part with one or more who cannot overcome the habit. We do not treat the use as an immorality, but as a disqualification for membership. We give them an honorable dismission that they may go elsewhere."

In conclusion, it may be of interest to read the circular before referred to, and give the result of the answers, a few of which I will read as giving the opinion, and often the experience of intelligent men on the subject, though most of them not medical men:—

Phillips Exeter Academy,
Exeter, N. H., *May* 15, 1882.

Dear ——,—The effect of tobacco upon boys has of late claimed the attention of many persons interested in the welfare of schools in England, France, Germany, and America. It has been the subject of discussion in our own Faculty. So far as we can learn, it is the unanimous testimony of physicians that the use of it by boys and young men is bad for mind and body. For this reason it has already been prohibited in the U. S. Naval Academy at Annapolis, and more recently in the U. S. Military Academy at West Point. In the report of the Surgeon General of the U. S. Navy for 1879 there is a careful scientific discussion of this matter by Dr. A. L. Gihon, Medical Director at Annapolis. Brief extracts from this report are sent herewith, to which your attention is respectfully called.

We should be glad to have you write to us and state what your own preference is as to the use of tobacco by boys in whom you are most interested, and also whether you would regard a rule prohibiting it entirely in this school as reasonable and practicable.

If any effort is made to suppress by school authority a practice that is working so much mischief with boys, and which yet is to many boys so attractive, we feel that the cooperation and support of parents is first of all to be sought.

You will observe that the question of the use of tobacco by adults is not touched; the inquiry relates simply to boys.

If you will give us your views upon this matter you will much oblige us and assist us in determining just the right measures to be taken with boys who are committed to our care.

Yours very respectfully, ——, Principal.

In response to this circular one hundred and sixty letters were received from parents, teachers, and others interested in the subject. Of these one hundred and sixty, all were unqualifiedly opposed to the use of tobacco by boys.

One hundred and twenty-four were in favor of prohibiting its use entirely in the school.

Ten were in favor of prohibition, if such a rule could be enforced.

Eighteen expressed no definite opinion regarding prohibition.

Eight thought a rule prohibiting it was not practicable.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

December 12, 1883. The meeting was called to order at eight o'clock by Dr. R. T. Edes, chairman.

The first paper of the evening was read by Dr. E. O. Otis, entitled

THE USE OF TOBACCO AMONG BOYS.[1]

Dr. H. I. Bowditch, in opening the discussion, said that it is high time that some measures were adopted to stop or at least to restrain the use of tobacco. For thirty years he has continually found a certain number of patients who have presented the symptoms of grave functional disturbance of the heart, for which no cause could be found excepting tobacco. There is no organic cardiac lesion, but it is a nervous weakness. This condition was very commonly observed during the late war. Nearly all the soldiers smoked, and many gradually acquired what was appropriately named the "tobacco heart." The reason why this condition prevailed so extensively at the time mentioned is no doubt found in the fact that tobacco enables men to endure hunger, cold, hardship, and privation better than they could without its aid. The active, exposed muscular life of the army enabled the soldiers to withstand the injurious effects of this substance better than would be the case in a sedentary occupation, or where one lives as a recluse. A moderate use of tobacco may unquestionably be continued for a long time, and probably indefinitely, without harm. There are few people in adult life who would derive any injury from three cigars daily; but the danger comes from the fact that the number is increased to ten or fifteen, and sometimes even to twenty-five in a day. Nearly all boys now smoke cigarettes to an inordinate extent, and it is painful to look forward to their future condition.

[1] See page 99 of this number of the Journal

In habitués of tobacco we frequently find errors of digestion, sometimes of most refractory character, though many persons commence to smoke from the supposition that the digestion is benefited by the use of tobacco. There is no question upon the fact that mental disease may be induced by the poisonous action of nicotine; and many smokers who are not insane have been rendered exceedingly nervous and irritable by the prolonged use of tobacco, and immediately give unmistakable evidences of absolute derangement if the customary indulgence is for any reason withdrawn. The duty of physicians would seem to be to endeavor to restrain the use of tobacco to an amount which shall not be injurious; for no attempt to stop its employment would probably be successful. Above all we should seek to restrict its use among students and youths generally. Punishment, such as expulsion or suspension from school, should be attached to disobedience, and all proper means should be employed to protect our scholars from its influence. The medical profession should take a decided position upon this important subject. Not only tobacco but all stimulants should be restrained to a limit within which they can do no harm. Tea and coffee should doubtless be included in the category of agents capable of harm. When in Paris in 1854 Dr. Bowditch found the favorite *café noir* to be such a nervous stimulant that he was able to work all night without the least feeling of fatigue. On returning to America, however, he found himself unable to follow his professional duties with his accustomed energy, but felt a great sense of lassitude and depression. He now reduced the use of coffee to once a day; but after three or four months he found himself subject to attacks of palpitation and cardiac pain, which recurred with considerable regularity. Dr. Jackson examined the heart, but could detect no organic lesion, and advised abstinence from coffee, upon which all symptoms at once disappeared. After a time the use of coffee was again commenced; whereupon the previous disturbances of the heart were soon reproduced. The harmful agent was again abandoned for fifteen years, when being once more in Europe, coffee was resumed in small quantity, but within a short time the old symptoms all recurred in a more intense form. Since that time no coffee has been taken, and no further trouble has been experienced The human system seems never to fully recover, after once being thoroughly saturated with any of these substances. The same is true of alcohol.

DR. GEORGE B. SHATTUCK thought it a too common habit, in speaking of these matters, to make the *abuse* and the *use* of a substance synonymous. It is also common to form general conclusions in regard to the effects of stimulants and narcotics from personal and individual experience, and to apply to our neighbors the rules we find necessary for ourselves. It is possible to be indiscreet and to commit excesses with beefsteak as with tobacco, and the individual should decide what *his* system requires. The subject of discussion before the Society, however, the speaker suggested, was the use of tobacco by *boys*; and in regard to this he felt sure that the members present would cordially agree with the paper of the reader, Dr. Otis, and with its conclusions that the use of tobacco by the immature, even in moderate quantities, is injurious and undesirable.

DR. HARLOW observed that if tobacco retards development during the years of growth, it must continue to be a harmful substance even after the body has reached its full growth, and would work injury at any time of life. If it irritates the heart in a boy, it will do so to some extent in a man. President Quincy was accustomed to advise students against the use of tobacco or stimulants while engaged in their collegiate course.

DR. MARCY stated that when a surgeon in the army he had observed occasions when tobacco was a godsend to the soldiers in aiding them to endure hardship and privation and cold and hunger. There are some organisms to which it may be of questionable benefit, but it is a serious injury to any growing person. There is no doubt that a popular vote would be largely against the general use of tobacco.

DR. PRINCE thought a distinction should be made in the form in which tobacco is employed, whether in cigarettes, or cigars, or a pipe. Cigarettes probably make a more lasting impression upon the system than cigars, and are harder to renounce. There is a popular impression that the principal injury comes from the paper containing the tobacco. This is not true. In cigarette smoking the vapor is inhaled, and coming in contact with the delicate mucous membrane of the air passages its active properties are at once absorbed, and produce an immediate effect, which can be perceived to the tips of the fingers. The succeeding sensation is one of ennui, malaise, indolence, and muscular hebetude, which soon becomes burdensome unless the stimulation be renewed and prolonged by a fresh cigarette.

DR. MARCY said that the question of the *form* in which tobacco is used is really important, if we are to judge of the *effect* from the quality of the substance employed. Many cigars are made from refuse of all kinds, which is pressed into shape and inclosed in a genuine tobacco leaf for a wrapper, while cigarettes more generally contain pure tobacco, particularly when they are made by the smoker as required for use. Certainly, as far as wholesomeness and cleanliness are concerned, cigarettes must be ranked as far preferable to cigars.

DR. LANGMAID stated that the most important questions in cigarette smoking are these: Does the inhalation of the vapor induce any disease of the mucous membrane with which it comes in contact? Does the smoke act upon the mucous membrane simply as smoke, or from the fact that it contains nicotine? Does smoking increase naso-pharyngeal catarrh? To these an affirmative reply must be given. If the mucous membrane is irritated, smoking invariably makes it worse. Will smoking produce a catarrhal state when none exists, or awaken a new one in a patient who has been cured of the disease? Observation teaches that it can do this. There is an increased secretion from the membrane, and all the other features of a catarrhal condition. Singers almost invariably abstain from smoking on those days upon which they expect to sing.

DR. BOWDITCH added that he will not treat a patient for sore throat unless smoking is abandoned for the time. He has, however, never observed any affection of the bronchial tubes as indicated by rales or other physical signs which could properly be laid to the influence of tobacco.

DR. CUTLER asked if any distinction was to be drawn between smoking and chewing. He stated that a teacher told him that students became much more stupid after smoking than after chewing tobacco. Dr. Mussey has

made the same observation in regard to the mental depression from tobacco.

Dr. Edes remarked, in closing the discussion, that the subject had been presented with great clearness and in a very unprejudiced manner. One of its excellent features was the absence of exaggeration upon a topic which is generally discussed in an eminently partisan manner. There is no doubt something to be said on both sides.

Dr. George M. Garland presented the next subject of the evening, as follows: —

THE TREATMENT OF FOLLICULAR TONSILLITIS.

Follicular tonsillitis is a self-limited disease, which runs its course in a certain definite time, presents a sequence of definite and successive phenomena, and finally returns to a normal condition in about the same interval of time, whether any active treatment be employed or not. Any treatment, therefore, is directed chiefly to minor points, such as (1) the rapidity of relief; (2) the time when the patient may return to business; (3) the convenience and comfort of the patient as far as the method of treatment is concerned, and the ease with which the remedies can be applied. The disease invariably presents itself in one of two types. First, there is a type in which the follicles are stuffed full, with swelling of the parts, general malaise, high temperature, and great prostration. The malaise lasts from twenty-four to thirty-six hours, and subsides entirely without treatment. I generally give some quinine and a gargle, because it seems necessary to give something in order to minister to the feelings of the patient and his friends, but the cure would take place equally well without any treatment whatever. In the second type there is high fever, considerable pain, prostration, and high pulse. The patient is in bed, and appears very sick. The general symptoms far outrank the amount of disease in the throat. This variety lasts from three days to a week or fortnight, running through a similar series of changes, excepting that they are somewhat more pronounced, as are observed in the milder variety of tonsillitis. The tonsils gradually return to a state of health, and the patient is cured just as in the type before mentioned. I have seen advised and have tried some of the nastiest things which can be made in the form of gargles. There is no danger attending the disease itself, there is no necessity for treatment of any kind, and above all there is no excuse for anything in the shape of disagreeable treatment of this disease by dirty and nauseous mixtures. The question of treatment rests only on the plea of shortening the disease and benefiting the patient. My plan is about this: Where the temperature is elevated to 102° F. or 103° F., I first give the patient a *sweat*. I do this by means of aconite. I prescribe five drops of the tincture, and direct that one third be taken immediately, one half of the remainder in half an hour, and the rest in an hour. I then give five grains of Dover's powder, and cover the patient warmly, up to the neck. When sweating commences I give all the water the patient desires for two hours. At the end of that time the sweating is generally pretty profuse. The patient is dried and allowed to get on the dry side of the bed, and is directed not to rise until the next day. My apology for the sweat is that it always relieves the sore throat, backache, pains in the limbs, and nausea. The relief to the throat from aconite is very great, so much so that the patient can generally take milk with comfort, which he could not do before. The next day there is only slight further treatment for the throat. I generally direct the patient to gargle with hot water; and by hot water I mean *very hot*, as hot as the patient can bear it. Hot water is preferable to cold. There is no treatment before the sweat, and no call for anything further after the gargle. Each time the hot water is used the patient feels better. There is no excuse for carbolic acid or any other medicament. No germicide can be used in sufficient strength to affect bacteria without being injurious to the throat. After the treatment above described there is generally constipation, which is relieved by a seidlitz powder; and I usually prescribe quinine as a tonic, to be taken for some time afterward in small doses.

My reason for introducing the subject of the treatment of follicular tonsillitis is that many physicians do not understand that it is a self-limited disease, and will do very well if let alone. They prescribe some disagreeable or disgusting gargle, which the patient often will not use, and sometimes *cannot*, and which it is practically impossible to employ in the treatment of children, who do not know how to gargle, and who resist anything of a disagreeable nature in the throat.

In a recent number of a Philadelphia medical journal I find an article by a man of that city upon this subject, and I desire to call the attention of the Section to the plan of treatment there advocated. If anything more nonsensical in theory or more disgusting in character can be put together, I do not know what it is. First, the throat is gargled or swabbed with a solution of equal parts of tincture of chloride of iron and water. This is repeated every two hours. The patient is confined to the bed, and not allowed to get up. Ten grains of quinine is given, and repeated in four hours if the fever has not subsided. This treatment is followed up until the throat symptoms disappear, and is then replaced by a tonic. The writer adds, "Cases usually recover in about a fortnight." Think of a child gargling the throat with a fifty per cent. solution of chloride of iron! And the rest of the treatment there advocated is fully as unnecessary as it is painful to the patient and burdensome to the friends. I claim that such treatment is not only useless but unjustifiable in any disease which is bound to get well any way, and which we can influence by measures equally effectual and less troublesome.

Dr. Liebmann observed that in tonsillitis there is according to the books general malaise but no rigor; while in diphtheria there is rigor. It is frequently the case that diphtheria comes on very insidiously, and commences as a tonsillitis, often confined at first to one tonsil, but afterward extending to the other, and being followed by the local signs and constitutional symptoms of usual diphtheria. It is a mistake to suppose that the onset of diphtheria is always announced by a rigor. Tonsillitis may be preceded by a chill, while diphtheria often supervenes without any such symptom.

Dr. Langmaid said: The great interest in follicular tonsillitis consists not in what the disease *is* but in what it is *not*; in other words, in the absence of any exanthem, or parenchymatous disease, or deep-seated infiltration of the throat or other parts, and in the freedom of the patient from any symptoms of a more serious malady. We are never sure that the sore throat, the follicular disease, may not be the local manifestation or the initial symptom of some grave constitutional affection, and we should be ever on our guard

The patient should be watched, and the same precautions observed in mild cases which would be necessary in a far more serious disease. It is not certain that the particular process of sweating has any advantage over the aconite alone or over the old time remedy for sore throat, nitrate of potash. The pain in the muscles is often relieved by the administration of salicylate of soda. All the older authorities speak of colchicum and guiac, and they evidently considered the pains as of rheumatic character.

Given a case such as is described by Dr. Garland, how can the physician be certain that the superficial inflammation is not to be followed by abscess of the parts. Dr. Garland does not probably mean to indicate that *all* cases should be looked upon as absolutely innocent. How can he know that instead of the creamy deposit there may not supervene a thick deposit and all the signs of a grave exudative disease.

Any one who has had the care of diphtheria must feel anxiety upon this point. A subsequent visit should always be made, in order to be certain that no dangerous condition has supervened upon the simple tonsillitis. After the exudation there is sometimes serous infiltration of the tonsil and the symptoms of diphtheritic infection appear.

The observer in Philadelphia is not so far wrong, for he doubtless felt the apprehension of some grave complication, and was striving to ward off more serious evils.

DR. DE BLOIS remarked that there is tonsillitis and *tonsillitis*. In many cases the patient is unable to open the jaws; and when the throat can be examined there may be very little observable change in the tonsil. Scarification of the gland is often a most beneficial mode of treatment.

On motion of Dr. De Blois, it was then voted that the further discussion of this subject be postponed until the next meeting, as an invited guest of the Section who was present had a very interesting case to show to the members.

(To be continued.)

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

JANUARY 14, 1884. DR. CHARLES D. HOMANS, presided.

DR. C. F. FOLSOM reported

TWO CASES OF INJURY TO THE BACK.[1]

DR. J. H. DENNY referred to four cases of injury to the back occurring in his own practice.

The symptoms described in the first case were so largely of subjective origin as to justify the extreme distrust of courts whenever presented as a basis of claim for damages on account of alleged injuries to the back. This is because the same symptoms prevail among girls during the early years of menstruation without previous accident, wherever there is a predisposition toward nervous disorders, which I believe is the chief factor in such cases, however it may be masked.

The second case presents objective symptoms, as anæsthesia, and it is to this class of symptoms, uncomplicated, however, with mental phenomena, that I wish to allude, as illustrated in several cases observed by myself at the department for nervous diseases in the City Hospital, showing that seemingly even slight injury, if real, is followed by pronounced objective symptoms. In none of these cases was there history of syphilis or any other predisposing cause.

(1.) A robust laborer was suddenly fastened, by a caving of stones and earth, below the last dorsal vertebra. When released he could walk home, and was not confined to bed, nor did he suffer pain to any great degree. After the lapse of six months I found him with the following symptoms: Legs weak, slightly anæsthetic, gait broadened and stiff, marked ankle clonus, and exaggerated patella reflexes. The symptoms were in brief those of lateral sclerosis, with probable extension of the process to the posterior segments of the cord. The patient remained otherwise in excellent health.

(2.) Following injury to the lower dorsal region in a laborer I found, several months subsequently, marked exaggeration of all the tendon reflex phenomena, occasional spastic rigidity of legs, cutaneous hyperæsthesia, paraplegia, and paralysis of the bladder. These symptoms indicated a symmetrical sclerosis, as in the preceding instance.

(3.) A healthy woman was thrown from a horse, but not immediately disabled. Her legs gradually lost strength, and became more or less anæsthetic, while the symptoms of ankle clonus and highly exaggerated patella reflex phenomena were likewise slowly developed. About a year afterwards, when seen by myself, she was unable to walk, but otherwise in excellent health and spirits.

In such cases degeneration of the lateral and posterior columns appears to have occurred, beginning below and progressing in the form of an ascending sclerosis, affecting the lower limbs first.

In the reported cases of ordinary forms of such disease, not resulting from similar injury, the process begins above, and is a descending sclerosis, affecting the upper extremities first.

In four cases of injury to the back below the dorsal region, reported by Dr. Schultze,[2] of Heidelberg, an ascending degeneration, affecting the lateral and posterior segments of the cord, was found on post-mortem examination. As yet such records of traumatic ascending sclerosis are very rare, but the plain evidence of the clinical modifications of motion and sensation in these cases of injury to the back indicates a similar pathological explanation.

DR. J. J. PUTNAM said that he had seen various manifestations in the same general train of hysterical symptoms occuring in these cases. Robust men, as well as women, may have typical hysterical hemianæsthesia, the symptom being mainly cerebral and not spinal. He also said that one should guard against mistaking a sprain of the deep muscles of the back for concussion of the spine, a condition which, in his opinion, has no existence. He thought, with Dr. Folsom, that rest is very necessary in the early treatment, but that it need not be continued indefinitely.

THE PRESIDENT reported

A CASE OF CHRONIC ULCER OF THE DUODENUM.

The patient was a physician, aged fifty-seven years. In early life he had always enjoyed excellent health,

[1] See page 97 of this number of the JOURNAL.

[2] Archiv f. Psych., etc., Bd. xiv., 1883.

never having been confined to his chamber but for a few days. He was quite robust and fond of out-door exercise, particularly of walking. He had lived a very regular life.

About nine years ago he began to complain of pain in the epigastrium, which he regarded as gastralgia, at times attended with nausea, though not then enough to keep him from his work. This pain was not aggravated by eating, but on the contrary was frequently assuaged by a meal. It was paroxysmal in character, and frequently quite severe, though not at that time necessitating the use of opiates.

In 1878 he went abroad, and while there seemed to recover entirely; the pain left him, and he seemed as well as ever. On the passage home he had again great nausea attended with vomiting, and arrived in Boston in quite a miserable condition. He gradually improved and attended to his business, though having at times more or less pain.

In 1879, while at Bar Harbor for his summer vacation, he suffered during a great part of the time from nausea and pain, at times so great as to confine him to the house and even to his bed; then these symptoms would subside, and he was able to take long walks with satisfaction. After his return home he became better, and was able to do his duty as physician and professor through the winter.

In the last days of May, 1880, he had several large hæmorrhages from the bowels which weakened him very much. He was confined to his bed and chamber for several weeks, but at the end of June was able to go to Bar Harbor, where he passed the summer. He gradually regained strength enough to take short drives and moderate exercise. His urine at this time contained a great deal of uric acid, and in November, after several days of pain, necessitating the use of morphine and ether, he passed a small renal calculus.

Through the winter of 1880–1881 he had attacks of pain, sometimes with and sometimes without nausea, but he was out a great portion of the time, attending to his professson in part.

The summer of 1881 was again passed at Mount Desert, but his sufferings were greater than they had ever been. He was almost continually nauseated, vomited a great deal, and, as he said, "in agony" unless when under the influence of morphine or ether. He became very much emaciated, and came home in September much worse than in the spring. The matter vomited consisted usually of thick mucus, and was very acid. He gradually improved, and during the winter could drive and walk about for short distances, and at times see patients, frequently, however, being troubled with pain and obliged to pass more or less time in his chamber.

The summer of 1882 was much more comfortably passed. He returned to the city, and during the winter was just about as well as the year before.

In May, 1883, he was in his bed for about three weeks with pain, nausea, and vomiting, but was able to go to his island home in the early part of June. Here he immediately began to gain flesh and strength, and for about three weeks had but little pain and enjoyed himself very much. But the old symptoms returned, and he spent a great portion of the summer in his chamber. He came back to Boston in September, and during the fall took short drives and walks, having, however, more or less pain every day. On November 12th he had a severe attack of pain and vomiting during which some altered blood was thrown up. From this time till his death his time was principally passed in his chamber, but in the intervals of comparative ease he went down stairs and out of doors several times. In the night of December 12th–13th he seemed in great agony, and ether was inhaled early in the morning with relief. At this time some tenderness was found at the right of the middle of the epigastrium, which gradually increased and was attended with some swelling, and it was evident that peritonitis was present, probably owing to perforation. He died at half-past six P. M. December 14th.

When the attacks of pain first came on the patient regarded his disease as gastralgia. Afterwards there was a question of malignant disease, but the long duration of the symptoms without the development of a tumor seemed to militate against that theory. As there was never any tenderness of the abdomen in any part, and as the pain was usually mitigated and frequently entirely relieved by the use of food, the diagnosis of chronic ulcer was for a long time uncertain, but after the hæmorrhages from the bowels, of which there were several slight ones besides the severe attack mentioned above, it was considered that his symptoms could be accounted for in no other way than by an ulceration of the duodenum, probably very near the stomach.

By way of treatment all the drugs usually employed to assist digestion were used without any good result. He declined to try the benefit of complete rest and a very restricted diet. Vegetables, sugar, and ordinary bread were not eaten, but when well enough he partook of everything else, though never with any great appetite. Milk and Mellin's food he could take when he could bear nothing else, and he always had one or both of these articles with him even when he went on a short drive. The pain was kept under by the subcutaneous injection of morphine, which he gave himself in the epigastrium. The amount used varied very much. For the last few weeks of his life he never used less than a grain and a half, while sometimes he would inject four grains in the course of twenty-four hours. As might be expected, constipation was a constant symptom. Recourse was had to the inhalation of ether when the pain came on very suddenly and severely, but it was little used save during the summer of 1881, and during the last thirty-six hours of life. He bore his sufferings very bravely, and as soon as the pain was relieved in some degree he would take up his work on a book, which he did not live to finish. He showed great self-control by always reducing the dose of morphine the moment it ceased to be necessary to alleviate his discomfort.

He was seen during the course of his long illness by Drs. Morrill Wyman and Francis Minot in Boston, by Drs. Longstreth and Amory in Bar Harbor, and at several emergencies by Drs. Cutler and Garland, whose devoted care he highly appreciated.

Dr. E. G. Cutler said that on opening the body there was general peritonitis, with little effusion, due to perforation which had taken place in the duodenum. On opening the duodenum one open, and one partially or wholly cicatrized ulcer was found. The former was just without the pylorus, and was the one where perforation had occurred, and the latter was an inch or more beyond it. Each was nearly the size of a quarter of a dollar, with abrupt edges. There were no enlarged glands, and nothing suggestive of a cancerous

nature was found. The source of the hæmorrhage was not seen on a superficial examination. At the apex of each lung there was some thickening of the pleura with condensed lung tissue underneath, and increase of the interlobular connective tissue of about an inch and a half area. A minute calculus was found in the pelvis of one kidney, and there was slight pyelitis of the organ. The organs, aside from presenting an anæmic appearance, were healthy.

DR. R. H. FITZ recalled the case of a man of sixty with ulcer of the duodenum, who had slight pain after eating, but no other symptom until perforation occurred.

DR. W. W. GANNETT thought that more blood had been lost than was at once apparent, as the fæces were stained with altered blood pigment, although there were no corpuscles. This pointed to small hæmorrhages.

DR. FITZ remarked on the value of an analysis of diets.

DR. HOMANS had never seen much difference in this patient in that regard.

DR. A. T. CABOT presented a specimen of Osteo-Sarcoma of the Head of the Femur, of five months' duration, from a boy of seventeen.

DR. W. G. WHEELER showed a specimen of

MALIGNANT DISEASE OF THE KIDNEY,

occurring in a man sixty-two years of age. Ascites existed, and the tumor was not detected until the patient was tapped, when sixteen pounds were removed, and a nodulated swelling was discovered. The urine was normal until four weeks ago, when blood appeared. There were neither vomiting nor pain, and the man had been at work until October, although he was treated elsewhere in June for disease of the liver. Œdema made its appearance first in one and then in the other leg.

DR. FITZ spoke of the rarity of the disease, there having been three or four specimens shown in this Society in three or four years, and they coming, some of them, from a distance. These cases are especially rare in children, but they do occur.

DR. WHEELER remembered a similar case in a child of five.

DR. GANNETT mentioned three cases, of from five to fifteen years, in Bamberger's clinic while he was in Vienna.

DR. H. K. SABINE said that in seven cases in children, reported by Monti, bloody urine was seen in two.

NEW YORK ACADEMY OF MEDICINE.

ANTISEPTICS IN THE NEW YORK HOSPITAL.

AT a meeting of the Academy of Medicine, held January 17th, DR. R. F. WEIR delivered an address entitled How Antiseptics are Used in the New York Hospital, — A Demonstration. In speaking of various antiseptics he said that carbolic acid and iodoform were open to serious objection on account of the dangers attending their use from poisoning. In the substitution of bichloride of mercury for such agents a great advance had been made. He had first employed the bichloride as an antiseptic in March, 1882. It was after reading the paper of Delacroix, and he used it at first in a very imperfect way. Since the publication of the researches of Koch, Kimmel, and others, however, we now had very clear ideas on the subject. It had seemed to him the acme of an antiseptic for surgical purposes, efficient, safe, and cheap, but during the last few days he had discovered that it was not entirely free from objection, since its solution was not durable. In the course of one or two weeks it became changed to calomel, as he had found by testing surgical dressings saturated with it with lime water. A few days since he had written to Professor Gibbs, of Harvard, in regard to the matter, and he had just received a letter in reply from him, in which he said that he thought the solution of bichloride might be made durable by the addition to it of a small quantity of common salt, say five parts to one thousand. He proposed, however, to make some further investigations on the subject.

In the New York Hospital wounds were generally dressed with gauze or cheese cloth impregnated with a solution of the bichloride, and a special gauze, free from sizing (which consisted of oily material), was manufactured for the hospital, which cost four cents a yard. The sizing could be removed from gauze which had it, however, by washing it with weak muriatic acid. The solution of the bichloride usually employed was made up as follows: bichloride of mercury 20 parts, water 44,480 parts, glycerine 500 parts. It was sometimes used as strong as one to 1000. The glycerine was added to prevent the gauze from entirely drying, as it became a little weakened when quite dry. Dr. Weir then exhibited a number of other substances which were employed for surgical dressings, such as cotton, jute, peat, wood-pulp, and moss. Of these peat was the most absorbent, taking up sixteen and a half times its weight of water, and it was also the cheapest, with the exception of the moss, costing six cents a pound. That which was used was of two varieties, the light and the dark colored (the two being sometimes mixed together), and it was imported from the north of Germany, though he had no doubt that it could readily be obtained in this country. The dressing which he preferred to all others was jute. This was bleached, pressed, and finely carded, and differed very greatly from the article with which most were familiar under this name. It seemed to him the ideal surgical dressing, although it was more expensive than the other substances named. Moss cost almost nothing, and in the few cases in which he had employed it it seemed to answer very well.

If an amputation, for instance, was to be performed, it was his practice to wash the part the day previous, or on the morning of the operation, with a mixture composed of two ounces of turpentine to a pint of alcohol. Before commencing the operation the "protector" was placed on the patient. This was simply a rubber cloth, with a hole through which the limb to be amputated was slipped, to keep the rest of the body dry. He had seen it used in the German hospitals during a recent trip abroad, and there it was a necessity, as antiseptic fluid was used very freely to irrigate the parts all through the operation. In regard to the spray, he said that personally he had abandoned its use except in operations about the joints and the abdominal and thoracic cavities, in which he still retained it. At this point he mentioned that Esmarch had devised some "antiseptic knives," in which the blades and handles were made of a single piece of steel, so that septic germs could not possibly lodge about them. The objection to them was that if the handles

became bloody they were very slippery, and so Tieman, of New York, had made a modification by constructing the handle of baked rubber, but entirely free from crevices.

Having exhibited a number of the most recently invented hæmostatic forceps, the most admirable of which he considered the instrument of Hahn, of Berlin, he returned to the consideration of the supposed operation. The amputation having been duly performed, and any hæmorrhage that might have occurred arrested as promptly as possible, the vessels were tied with catgut ligatures. Formerly he had always used Lister's carbolized ligature, which was quite strong, but objectionable on account of its slipperiness, from the fact that it was prepared with a solution of carbolic acid in oil. Moreover, Koch had recently found that carbolic acid when mixed with olive oil altogether lost its antiseptic properties. Lister had also recommended a ligature prepared with chromic acid; but the objection to this was that it lasted too long, and, consequently, acted as a foreign substance in the tissues, and was liable to cause more or less irritation. The ligature which Dr. Weir now used was one composed of fine catgut treated with solution of bichloride of mercury. It was prepared by dipping it first into a solution of the strength of one to one hundred for ten minutes, and then leaving it immersed in a solution of one to one thousand for twelve hours, after which it was wound on a bobbin and put into ninety-five per cent. alcohol. A ligature thus prepared was liable to be somewhat brittle, but this difficulty could be avoided by mixing oil of juniper with the alcohol. It would be even better, he thought, if it was kept in pure oil of juniper.

The wound was closed with the continued instead of the interrupted suture, catgut ligatures being used for the purpose, and openings being left at both ends for the insertion of drainage tubes. The black rubber tube was that usually employed, but one trouble with it was that if it was allowed to remain in position for more than from three to five days an open tract would be formed which would remain too long. If, on the other hand, the tube were withdrawn earlier than that it would necessitate the changing of the entire dressing, which was often a great disadvantage. In order to obviate this difficulty a decalcified bone tube had been devised, which after a time became entirely dissolved. After the drainage tubes had been placed in position the whole wound was flushed with bichloride of mercury solution until the latter came away perfectly clear. Compresses of antiseptic gauze were then fastened over the wound with sufficient tightness to keep up a moderate amount of pressure, and over these was placed the absorbent cushion, made of one of the substances before mentioned tacked in, so that it would not become disarranged. Then over the whole dressing a crinoline bandage was applied. In many instances an amputation was expected to heal under one or two dressings, and it was found, as a rule, that the fewer the changes of these the more rapid the progress towards cure.

All this, of course, presupposed cleanliness, and, indeed, some went so far as to say that the entire secret of the success of antiseptic methods depended on this point. Lawson Tait, of Birmingham, who did not practice Listerism, and yet had achieved such wonderful success, was the apostle of cleanliness, and his operating room, Dr. Weir said, was the cleanest place that he had ever seen. All his instruments were kept under water, and he was particularly struck with the care which he observed in preparing his sponges. When visiting his wards he saw quite a number of cases of ovariotomy, hysterectomy, and other serious operations, and all were doing well. The only trouble that he noticed was two or three stitch-hole abscesses, which he thought would not have existed if antiseptics had been used. Keith, of Edinburgh, practiced the antiseptic method, with the exception of the spray, which he rejected. Some surgeons now, during their operations, in lieu of using the spray, kept the parts wet with a boro-salicylic acid solution.

Dr. Weir thought it was a point of great importance to use extreme care with the sponges employed in surgical operations, as he believed that more risks were run in this direction than in almost any other. Sponges could now be purchased so cheaply that he thought it advisable, as a rule, to throw them away after using them once. The sponges which were employed at the New York Hospital were first thoroughly hammered, in order to get all the sand out of them, and then placed in warm water, which was preferable to hot. Next they were kept in a solution of permanganate of potassium for about twenty-four hours, and then washed out in water, after which they were treated with a solution of one part of sulphide of sodium to one hundred parts of water, to which had been added one fifth part of a solution of hydrochloric acid or oxalic acid (one to one hundred). Next they were placed in running water, and finally dipped in carbolic acid solution, one to twenty, or bichloride of mercury, one to one thousand. If used in operations about the vagina, rectum, or abdomen, the sponges were thrown away after being used once, but after being used in amputations and other operations they were cleansed and disinfected by the same process by which they were originally prepared.

In concluding, Dr. Weir gave some statistics in regard to compound fractures and amputations, which showed in a very striking way the advantages of the antiseptic method. In compound fractures the rate of mortality at St. Luke's and the Roosevelt Hospitals, New York, had formerly been thirty-three per cent. In the old New York Hospital it had been sixty per cent., and in the Boston City Hospital forty-one per cent. With the open method it had been twenty-six per cent. Under the strict antiseptic plan, however, the mortality in compound fractures in Dr. Weir's hands had been only six per cent., and some surgeons had reported even a better showing than this. On account of the saving of life secured by the methods which he was the first to propose he thought, therefore, that the name of Joseph Lister was entitled to more honor than any other in this century, not excepting that of the discoverer of anæsthetics.

THE NEW YORK COUNTY MEDICAL ASSOCIATION.

DR. AUSTIN FLINT ON THE PATHOLOGICAL AND PRACTICAL RELATIONS OF THE DOCTRINE OF THE BACILLUS TUBERCULOSIS. — PRESENTATION OF A SPECIMEN OF HYDATID TUMOR OF THE SPLEEN.

The first public meeting of this new Society, which has been organized for the purpose of upholding the National Code of Medical Ethics, and securing the representation of the profession of New York again in

the American Medical Association, was held at the College of Physicians and Surgeons, New York, on the 14th of January. The president of the Association is Dr. William Detmold, the vice-president, Dr. Charles A. Leale, and the secretary, Dr. E. A. Judson. It was a large and enthusiastic gathering, and when, after a brief inaugural address by the President, Professor Flint arose to read his paper on the Pathological and Practical Relations of the Bacillus Tuberculosis he was received with a prolonged storm of applause. Before commencing it he congratulated the Society on the auspicious circumstances under which it had started upon its career of usefulness, and said that he esteemed it no small honor to be the first to present a scientific communication to it.

The history of tuberculosis during the last quarter of a century, he said in his paper, afforded a striking example of the mutability of medical opinion. About twenty-five years ago Virchow had enunciated the doctrine that the term tubercle should be confined exclusively to the so-called granulations of Bayle. This dogma, which was founded upon a pathological basis, was universally accepted, and from this time phthisis and tuberculosis were regarded as entirely distinct diseases, although it was admitted that the two were associated in certain instances. This view, however, was in direct opposition to the results of the clinical studies of such masters as Laennec and Louis, and so in order to reconcile the old opinions as far as possible with the new, certain predisposing and concomitant conditions were classed under the term vulnerability. The therapeutical aspects of Virchow's doctrine were unfortunate, for patients affected with phthisis were subjected to measures designed for the treatment of chronic inflammation, such as local blood-letting, mercurials, and confinement within doors, notwithstanding the fact that this course was opposed to the clinical results of the illustrious teachers mentioned.

It had required nearly a quarter of a century to convince the profession that these views, based on the microscopic investigations of Virchow, were erroneous, and the conclusions to which they led false. This whole matter, therefore, taught the evil of rash deductions from pathological research, and not only this but the safety of trusting to clinical experience. The lessons taught by Laennec, Louis, and the other great clinical lights of their school were as valuable to-day as they ever were.

Dr. Flint then went on to speak of the researches of Villemin, who, in 1865, announced the inoculability of phthisis. That there was a specific virus, however, was generally regarded as disproved by the fact that the inoculation of other agents beside tubercle seemed also to induce tuberculosis in certain animals. This apparently fatal objection was in a great measure entirely removed when Koch made known his discovery of a specific organism characteristic of tuberculosis in the year 1882. Two things were remarkable about this discovery: (1) that it should at once have excited so much interest in all parts of the civilized world, and (2) that the bacillus tuberculosis should be so generally accepted by practical histologists, who were most competent to disprove or confirm its existence and significance. Having stated that positive proof of the bacillus being a micro-organism distinctly characteristic of tubercle had been afforded by the results of its culture under circumstances which excluded all sources of error, Dr. Flint next proceeded to inquire into the nature and extent of its connection with tubercular disease. The all-important question was whether or not it was the causative agent, and the experiments in the cultivation of the bacillus, quite devoid of any morbific agent adherent to it, outside of the body, he thought had demonstrated conclusively that the question must be answered in the affirmative. Koch's observations had never been successfully disproved. It followed that pulmonary phthisis was an infectious disease, a multiplication of the causative agent taking place within the body. Two conclusions could, therefore, now be stated: (1) that no case of phthisis took place without the presence of the bacillus, and (2) that phthisis was primarily a local disease, having its seat in the lungs, and directly due to the agency of the bacillus. The local pathological process extended, and the development of the disease in other parts of the system depended on the migration of bacilli.

He next took into consideration certain clinical facts which seemed to bear against Koch's hypothesis. This antagonism, he thought, was apparent rather than real. Pulmonary phthisis was undoubtedly a diathetic disease, and heredity was not merely an accidental coincidence in connection with it. In some climates the disease was met with more frequently than in others, and a humid soil, defective alimentation, mental depression, want of ventilation, confinement within doors, and similar conditions were believed to have no little to do with its causation. Age also was a point that entered largely into its ætiology. How could these facts be reconciled with the proposition that the efficient cause was a *contagium vivum?* In order that this contagium should produce its effect upon the system certain special concurrent and coöperative requirements were necessary. The nature of these conditions was unknown, but the fact of their essential importance was perfectly certain. They might all be embraced under the name *predispositions.* The same elements of a contagion and a predisposition were very evident in yellow fever, for instance, and in this disease the two had been very aptly compared by the late Dr. Barton to the two blades of a pair of scissors, which were only of use when coupled together. The contagium and the predisposition were perfectly inert unless combined with each other. The predisposition in phthisis was the diathesis, and this might be either congenital or acquired. It was practically impossible to avoid the inhalation of bacilli as long as phthisis was as common as it was at present almost everywhere in the world, and in the consideration of this affection it was necessary to apply to it the same truths that were applicable to other infectious diseases.

Proceeding to consider the matter of diagnosis, he said that of its great importance he was able to speak from a very considerable experience. Not professing to be himself a skilled microscopist, he had had the sputa of a large number of patients suffering from phthisis examined by Prof. William H. Welch and other competent observers, and the bacillus had always been found to be present. In any case where there had previously been any doubt about the diagnosis, if the bacillus was discovered it was regarded as proof positive of the existence of phthisis. If it was not found the presence of the disease might be doubted. He thought, therefore, that the time was not distant when the examination of the sputa in thoracic affections would be as common as that of the urine in suspected renal disease. So far as his experience went

the abundance or fewness of the bacilli found in any instance was a sure index of the activity of the tubercular disease present, and this was a point which had an important bearing on prognosis. For a long time past, Dr. Flint said, he had taught that phthisis was a self-limited disease, and the explanation of this he now believed to be that the race of bacilli after a time became extinct.

The next point taken up was the prevention and treatment of the disease in their relations to the bacillus. In order to insure protection against it it would be necessary (1) to avoid all exposure to contagion, and (2) to remove all predisposing causes. The first point it was evidently impossible to carry out unless we could find some spot in the world where there had never been a case of phthisis. Even at this moment the gentlemen present might be inhaling bacilli if there were in the room any individual suffering from the disease. Perhaps as safe a place as could be found was on shipboard, provided no case of phthisis were on the vessel; but it would not do to order perfectly healthy persons to spend their lives at sea. The danger from exposure varied in proportion to its degree and extent; and here a great deal could be gained. Healthy individuals should breathe as little as possible the same air as those suffering from phthisis, and the disinfection of the sputa of such patients should not be neglected. The freest possible ventilation should also be insisted upon; and not a little might be gained by attention to such points as these. In the removal of predispositions we had to contend with the difficulty of recognizing the presence of the predisposition before it was too late. If deaths from phthisis had occurred in the family, however, the predisposition certainly existed, and special care was to be enjoined during the early years of the individual. If the existence of any predisposition was simply probable, it was better to err on the side of over-caution, and the lessons of common sense and experience would offer a safe guide. Residence in a dry, salubrious climate with an atmosphere rarefied by elevation, the maintenance of cheerful spirits, exercise in the open air, and the highest grade of constitutional vigor attainable had been shown to be useful preventive agents.

Theoretically the treatment would consist of (1) the destruction of the parasite, and (2) the removal of conditions under which it thrives. Although not two years had elapsed since Koch's discovery was announced to the world, a large number of agents had been proposed and experimented upon with a view of destroying the bacillus, such as corrosive sublimate, iodoform, arseniate of soda, and salicylate of soda. As yet no efficient parasiticide had been found which, when taken into the system in sufficient quantity to have any effect upon the bacilli, would not prove injurious to the patient; but that this end might be achieved in the future was not beyond the range of possibility. The removal of the conditions upon which the existence of the parasite depended could be carried out better. The disease would cease to exist when the two factors, the bacillus and the predisposition, could be done away with. The discovery of Koch, therefore, while it had thrown much light on the ætiology and pathology of phthisis, as well as given us considerable aid in the way of diagnosis and prophylaxis, had not materially affected the treatment of the disease, in which we must continue to trust to the light of reason and experience.

DRS. WILLIAM H. WELCH, E. G. JANEWAY, and GEORGE PEABODY all stated that they were in complete accord with the views advanced in the paper, and also spoke of the comparatively little value of negative testimony, especially after a single examination, in regard to the bacillus as compared with positive. Dr. Janeway called attention to the fact that in the early stages of the disease it was often difficult to obtain any sputa at all from patients. In some instances in which this had been the case he had found later on in the course of the disease that bacilli were abundant in the sputa.

The discussion was brought to a close by DRS. LEALE and NELSON, who related cases in which tuberculosis seemed to be directly communicated from one member of a family to others. In that given by Dr. Leale a family of six individuals was entirely swept away by the disease within a space of ten years.

DR. WILLIAM H. WELCH then presented a specimen of hydatid tumor of the spleen, which had been removed from the body of a German who died in Bellevue Hospital from extensive superficial burns; there being no previous history of disease. The tumor was a large echinococcus cyst with a firm fibrous capsule, and also characterized by some calcareous deposits. On making an incision into it about four ounces of opalescent fluid escaped, and within it was a large mother cyst, which had collapsed. About this were at least two hundred daughter cysts, varying from the size of a pea to that of a hen's egg. The growth was, therefore, of the exogenous variety, which was stated to be considerably more rare than the endogenous, in which the daughter cysts are formed within the mother cyst. No heads of echinococci were found, but some hooklets were met with. Dr. Welch then proceeded to give a demonstration on the blackboard of the development of echinococcus cysts in the human subject, and in conclusion spoke of the third variety, the multilocular, which, he said, had never been met with in this country, and which, as it was found exclusively in Switzerland and Southern Germany, he thought was probably not produced by the same embryo as the exogenous and endogenous cysts.

NEW YORK NEUROLOGICAL SOCIETY.

STATED meeting, January 8, 1884.

DR. WILLIAM J. MORTON, President, in the chair.

NOTE ON THE USE OF THE MENTHOL CONE AS AN ANODYNE.

DR. E. C. WENDT showed a little contrivance called by the Germans "*Migräne Stift*," and explained its application and uses. It consisted of a piece of menthol moulded into a conical shape and secured in a little wooden box, closed by a cover to prevent evaporation and breaking. It seemed to be little known here, although it was much used abroad, especially for sick headache.

His attention had been first directed to the anodyne properties of menthol by a short notice in the *Medical Record* of April 28, 1883, by Dr. Cammann, who had recommended an alcoholic solution of menthol (one drachm to one half ounce alcohol) to be painted over the affected parts. Dr. Wendt had since that time often used this solution, and found it an anodyne.

In this country menthol had not yet received that amount of recognition from the profession to which

its pain-obtunding properties would seem to entitle it. In fact, little seemed to be known about it, and for this reason Dr. Wendt thought it might not be amiss to quote a descriptive notice of it: "Menthol, or menthylic alcohol, is a crystalline substance, deposited from the oil of peppermint, prepared in China and Japan from *Mentha Arvensis var.-piperascens* and *glabrata*." It formed the chief ingredient of a much valued remedy for neuralgia before its source was generally known, what was sold in small bottles, labeled with Chinese characters.

It is a white crystalline stearopteno, melting when pure at 97° Fahrenheit, and is obtained by the Japanese from the oil of peppermint by submitting it to freezing several times in succession until no more menthol crystallizes out.

It is also said to be contained in the American and English oils of peppermint, but probably in small quantities only. It is somewhat surprising that the Japanese peppermint plant which is grown in England as a curiosity has not been cultivated in that country, as a source of the drug, the supply of menthol being uncertain, the demand great, and the price in consequence occasionally very high.

Menthol is said to be sometimes adulterated with crystals of Epsom salts, to which it bears a great resemblance. These being insoluble in alcohol or chloroform, in which fluid menthol is freely soluble, can easily be detected. Samples of fine crystals sometimes contain some essential oil adhering to them, a fact which must be taken into consideration when the menthol is made into cones or pencils.

Menthol is but slightly soluble in water, although imparting a strong odor and taste to that liquid, and is soluble in aqueous alkalies. It is soluble in fixed and volatile oils and in ether.

Although Dr. Wendt's experience with menthol had not yet been a very extended one, it had nevertheless been sufficient to convince him of the utility of the drug in a rather large class of cases. He had found it a pleasant and reliable anodyne in all the lesser neuralgias, and especially in those so frequently occurring about the face, but it was also serviceable in many painful affections due to inflammatory processes. Its topical action was similar to that of aconite, over which it had the advantage of not being poisonous.

Dr. Wendt remembered one rather striking case of quite severe supra-orbital neuralgia, which refused to yield to the oleate of aconitia, but was much benefited by menthol. But, on the whole, in violent attacks he had found it almost useless. In typical migraine, for instance, where the pain was at all severe, and in all deep-seated aches of more than very moderate intensity, it had no appreciable effect, except, perhaps, the indirect psychical action of distracting the sufferer's attention.

In the discussion which followed these remarks, DR. ROBERTS asked Dr. Wendt if he had tried the prolonged application of menthol.

DR. WENDT said that he had in some cases of hemicrania, though without decided benefit. Nevertheless, the patients experienced a pleasant sensation of coolness of the surface, followed by a feeling of agreeable warmth.

DR. MORTON thought that menthol probably acted more after the manner of counter-irritants, by insuring relief in a reflex rather than in a directly local way. Mustard was a typical peripheral nerve-irritant, and it seemed to him that the action of menthol could be best explained on the same principle of procuring peripheral nerve-impressions in a reflex way. Dr. Morton's attention had been first called to the menthol-cone by Dr. Wendt. He chanced to be at the latter's office one day when suffering from a headache. A few strokes of the menthol gave him at once a sense of relief. He felt the effects of the peppermint to be as gratefully cooling as the application of cold metal. In brachial neuralgia, as well as in sciatica, he had been pleased with the good effects of menthol. He thought the drug was deserving of further trials.

DR. RALPH L. PARSONS then read a paper on

DETENTION IN ASYLUMS.

The reader considered the questions whether sane persons were not often unjustly detained in asylums for the insane; and, secondly, whether many uncured and incurable patients were not methodically detained in asylums who might advantageously be returned to their relatives, or placed in the care of private families under State supervision.

It was assumed in the first instance that the detention of patients after recovery had taken place was quite possible and even probable in some instances, but that such detentions were not usually of serious import to the patient; that, on the other hand, too early discharge might be more injurious. It was also admitted that maliciously unjustifiable detentions were possible, as any other sort of injustice is possible on the part of persons holding positions of power and responsibility. But reasons were urged in support of the belief that such malicious detentions were at least very rare; that sentiments of honor and professional pride were strong deterrents, to say nothing of the great danger of detection in the commission of the wrong, and the ease with which patients who were decidedly insane obtained their enlogement through the intervention of the courts.

Cogent reasons were given why various classes of convalescents ought to remain under asylum care for a period of time after they appeared to be well; as, for instance, when they would be immediately subjected to the exciting cause of their insanity on their return, when the progress toward convalescence had been characterized by relapses, or when dangerous delusions had been entertained and had faded away so gradually that there were difficulties in judging whether they had passed away entirely.

But, on the other hand, the discharge of certain uncured curables before they were well was advised, as when after making a certain degree of improvement, this improvement stopped, and the patient seemed to retrograde. It might be highly advisable to discharge some of these patients before they were well.

The major part of the paper was devoted, however, to an advocacy of the discharge from the asylum of harmless incurables and their return to the care of their friends, or placing them with ordinary families as boarders. However comfortable and happy such patients may appear to be in large asylums, there are many causes of discomfort that would not be experienced in ordinary family life. Quotations were made from Dr. Bucknill and from Dr. Maudsley strongly supporting these views.

The question was then considered, what classes of incurables might safely and with benefit be released from asylum restraints. Since in the case of a great

majority of such patients moderate cost of maintenance would be essential, those only would be adopted who were quiet and orderly, and would require no especial supervision. Habits of industry would be favorable.

Whether such patients would do better with their relatives or with strangers would depend on the circumstances of the family, the feelings or notions of the patients, etc. Many patients who would not do well with their own kindred would be happy and useful with congenial strangers. It would be impossible for the patient to resume his former position and influence in his own family, and hence he would be subjected to annoyance there.

As a preliminary measure, a system of legalized furloughs was advocated, to the end that at first the patient might still be under legal restrictions and easily returned to the asylum if the trial at large should prove a failure.

The paper closed with the following summary of conclusions, to wit: —

(1.) That, inasmuch as many recoveries take place in asylums for the insane, it is to be expected that some convalescent patients may at any time be found in the wards.

(2.) That while possibly now and then a convalescent patient may be detained on probation an unnecessary period of time, such cases are not of frequent occurrence, nor important in their consequences when they happen, and that when they do occur the detention is very rarely indeed through criminal intent.

(3.) That many harmless incurables are unnecessarily detained in asylums for the insane; that these incurables would be happier in the enjoyment of ordinary family life and associations, and that systematic efforts should be made to secure their enlargement and their establishment under family care.

(4.) That under certain circumstances curable patients should be removed from asylum restraint and associations while yet uncured.

Owing to the lateness of the hour, the discussion upon Dr. Parsons's paper was postponed until the next meeting of the Society.

Recent Literature.

Transactions of the American Gynæcological Society, Vol. 7, 1882. H. C. Lea's Son & Co.

Full abstracts of the papers read at the meeting of which this volume is the official report were widely published in the weekly journals; but so long a time has since elapsed that the book has almost the charm of novelty. We learn, however, that the Transactions for 1883 are already in press, and that hereafter the successive volumes will be promptly issued.

The President, Dr. T. A. Emmet, departing from the custom of his immediate predecessors, chose a professional subject as the topic for his annual address; namely, A New Method of Exploration, with the Pathology and Treatment of Certain Lesions of the Female Urethra. The new method consists in making a button-hole-like opening into the urethra, avoiding the urethral outlet and the neck of the bladder: through this opening ocular and digital examination can be made, and appropriate treatment effectively applied. The urethral fistula thus created can be kept open a longer or shorter time, as required for purposes of treatment, and then closed like a vesico-vaginal fistula, except that the sutures must be passed so as to include the urethral mucous membrane. This method has borne the test of experience, and seems to us to be a great advance in operative gynæcology. Dr. W. H. Baker's communication showing the value of bladder drainage by cysto-vaginal fistula in the treatment of hyperæmia of the neck of the bladder is of especial interest in this connection.

Dr. J. T. Johnson's paper on the Proper Use of Ergot in Obstetrics emphasizes the well-known dangers of this drug, if given before the uterus is empty. We quite agree with Dr. Johnson that, viewing the use of ergot as a whole, the race would be better off without it altogether: and we believe with him that midwives, in whose hands this drug becomes in many cases a veritable "pulvis ad mortem," should be restrained, by legislative means if necessary, from its indiscriminative use.

Dr. Fordyce Barker's paper reminds the profession that leucorrhœa is not a disease to be treated as such, nor the symptom solely of uterine disease, but is often the expression of a constitutional cause which should be combated by appropriate general and hygienic treatment. The tendency of many gynæcologists is to lose sight of this fact in their zealous administration of local treatment.

The valuable paper of Mr. Knowsley Thornton shows by the careful comparison of statistics that the complete removal of the uterine appendages is a safer operation than supra-vaginal hysterectomy, and, at the same time, an equally effective procedure for the cure of uterine fibroids. There are cases, of course, where the latter operation must of necessity be performed, but the mortality reaches the high figure of from thirty to forty per cent. even in the hands of experienced surgeons. On the other hand the experience and intelligent observation of Mr. Thornton have convinced him that the milder operation cures the disease, and that the mortality therefrom should be *nil*. It is necessary however, for success, not only that the ovaries should be completely removed, but that all the lateral vessels in the broad ligaments should be completely ligated and the chief blood supply to the uterus thereby cut off. The paper is an admirable exposition of the present status of the two operations.

Dr. Van De Warker's exhaustive paper on Mechanical Therapeutics of Versions and Flexions of the Uterus deserves careful study by all who resort to mechanical means for the correction of uterine malpositions. The profuse illustrations add greatly to the value of the communication.

Dr. J. Collins Warren submits a new method of operative relief in certain cases of complete rupture of the perinæum where the recto-vaginal septum is largely involved. This method is now undergoing the test of experience, and, so far as we learn, with gratifying results.

The contribution of Dr. M. D. Mann concerning Surgical Operations on the Pelvic Organs of Pregnant Women collates the experience of many eminent gynæcologists and throws much light on a subject on which it was much needed. The paper will repay careful study.

Dr. W. L. Richardson presents a fourth and fifth series, of one hundred and eight cases each, of measurements of the uterine cavity in childbed. This brings the number of cases reported by Dr. Sinclair and himself to five hundred and forty; and when the number

reaches one thousand it is Dr. Richardson's purpose to present general deductions therefrom: the profession will await the final report with interest.

The remaining papers are by Dr. Thomas on the History of Twenty-one Cases of Extra-uterine Pregnancy; Dr. Garrigues on Electricity in Extra-uterine Pregnancy; Dr. Parvin on the Care of the Perineum; Dr. R. S. Sutton on the Treatment of the Pedicle after Ovariotomy; Dr. Busey on the Influence of the Constant Use of High-heeled French Shoes upon the Health and Form of the Female; and Dr. Drysdale on the Ovarian Cell. The volume ends with Dr. Thomas's memoir of the late Dr. James Platt White, and the valuable index of gynæcological and obstetric literature of all countries for the year 1881.

C. M. G.

Intra-Thoracic Effusion. By NORMAN PORRITT, L. R. C. P. London, M. R. C. S. Eng., etc. London: J. & A. Churchill; Huddersfield: Alfred Taft. Pages 304.

This essay was awarded the Fothergillian gold medal for 1883 by the Medical Society of London, and deals mainly with effusion into the chest from the point of view of a surgeon, — its operative treatment by paracentesis or tapping, and thoracentesis or free incision. The point of election for both operations is in the back, the seventh interspace on the right, the eighth on the left; and a rule is given for finding the eighth space which is new. The position of the lower angle of the scapula when the arm is at the side is to be marked on the skin, and again when the arm is raised above the head; an inch below the middle of the line connecting these two points will always be found the desired interspace. While we cordially agree with our author in his preference for the back in tapping, the posterior axillary line seems to us better for the free incision, as the patient can then recline or lie upon his back without causing pain by pressure against the tube. The author seems to have discarded the aspirator, but uses a canula to which is fastened rubber tubing, the lower end of which is kept constantly immersed in a five per cent. carbolic acid solution. The trocar is passed through the side of the tubing and into the canula; when the pleural cavity has been reached the trocar is withdrawn, and the flow of fluid is started by the vacuum left in the canula, while the elasticity of the rubber closes the small hole in the tubing caused by the passage of the trocar. The risk of suction of the air in the tube into the chest is very slight, but, for precaution's sake, it is better to carbolize the interior of the tube before using it. Mr. Porritt makes no claim to originality in the use of the siphonage method, but we dwell on it here as we believe it to be in every way safer for the patient, though it requires more of the attendant's time, unless, indeed, "the patient may be left in charge of a trustworthy nurse" while the fluid escapes. We notice that the canula figured on page 21 is furnished with a lateral opening as well as the usual one at the end, the advantages of which are obvious.

In thoracentesis chloroform is preferred for children up to ten years of age, "for, unless very young, it is impossible to restrain their movements;" for all older patients ether is to be used. We are somewhat surprised at the length of double tubing which Mr. Porritt allows to remain in the chest after free incision, six inches in adults, four in children. On the sixth or seventh day the tubes may be shortened, and subsequently at each change of dressing, according to the progress of the case. If the opening is anywhere near the base of the chest we do not see what advantage is to be gained by the presence of six inches of double tubing, and we can see how cure may be retarded. It is almost needless to say that the strictest antiseptic precautions are enjoined.

On page 190 we find details of a case of large phthisical cavity at the base, which was opened and drained with happy results to the patient, the most successful case of the kind which we remember having seen in print.

Paracentesis pericardii should have received more extended notice in an essay so thorough and full of details as to all other aspects of operative interference with effusion into the chest. The author assigns as his reason for relative silence that he has never had occasion to perform the operation. Three of the four cases of free incision for purulent pericarditis with which we are acquainted have been reported since this essay was written, but Rosenstein's successful case was published in 1881.

The paper and typography are not quite up to the mark, and we have met with some half dozen oversights of the proof-reader not noted in the long list of errata which precedes the preface.

In conclusion we must express our obligation to Mr. Porritt for his valuable, painstaking, and nearly exhaustive essay, which should, and doubtless will, be widely read. That we have thought it necessary to criticise a few points may be taken as evidence that we have found the work worth careful study. F. C. S.

A Treatise on the Diseases of the Eye. By J. SOELBERG WELLS, R. C. S., etc. Fourth American from the Third English Edition, with copious additions, by CHARLES STEDMAN BULL, A. M., M. D., etc., etc. Philadelphia: Henry C. Lea's Son & Co. 1883. 8vo, 846 pages.

A new edition of a work as widely and favorably known as this requires notice only of the changes which have been made. The time between the publication of this and the previous edition is less than three years, yet the editor has evidently not been sparing of effort to incorporate in the book whatever of interest and value has appeared in the interval. As in former American editions, there has been little alteration of the original text, but the new material has been added in brackets. The arrangement of chapters has been somewhat altered. The section on Ophthalmia Neonatorum is wholly new, and the author recommends as prophylactic measures a modification of Credé's method. There is also a new section on Membranous Conjunctivitis. The views of Sattler on the parasitic origin of trachoma are given, but the method of treatment of trachoma and pannus by jequirity was published too late to find insertion. Additions are frequent throughout the book, some of the more important being on the operations of the author and Landolt for deformities of the lids; the comparative value of mydriatics; the theories of sympathetic ophthalmia and of glaucoma; optic neuritis in intracranial disease; and conjugate deviations of the eyes with bulbar lesions. The account of the latter condition we think might have been expressed more clearly. On the whole the work maintains its former high standard.

Medical and Surgical Journal.

THURSDAY, JANUARY 31, 1884.

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SOME OLD-TIME DOCTORS.

THE "Old Residents' Historical Association," of Lowell, Mass., has done much to collect and perpetuate by its published reports facts of interest which too often, for the lack of such an organization, have been allowed to perish with the lives of the possessors. A recent volume of their contributions, devoted to reminiscences of the early physicians of Lowell and vicinity, has been sent to us through the courtesy of Dr. John O. Green, President of the Association. The paper is prepared by Dr. D. N. Patterson. It is much to be wished that in other communities a similar labor of love might be performed in preserving the memory of a past medical generation. There is much for physicians of the present day to learn from the sturdy characters of such men, and the general public can appreciate from sketches like these the debt under which the community lies to the faithful services of the medical profession.

For reasons which are obvious the sketches published include only the names of men now no longer living, but we find among them several whose reputation had extended far beyond their own vicinity. Such are Dr. Elisha Bartlett, professor in at least five schools of medicine, among them the College of Physicians and Surgeons of New York. Dr. John C. Dalton, born in Boston, and returning hither in his later years to reap the fruits of his medical honors, and to be appointed senior physician to our then newly-built City Hospital, who yet spent the most active years of his life in Lowell and in its adjacent towns. An interesting story is related as to one of his early diagnoses. He had been selected by Dr. Wyman, on the retirement of the latter to the superintendency of the McLean Asylum, to succeed him at Chelmsford, being then twenty-three years of age. An old man from New Hampshire, while traveling through the town, was thrown from his sleigh and sustained an injury to his hip, which Dr. Dalton pronounced a fracture of the neck of the femur, and treated accordingly. The patient became restive under confinement, and insisted on being taken home. He had a large box made, into which he was placed with his apparatus and conveyed in a wagon a hundred miles, not in easy stages. Dr. Dalton naturally condemned the plan, but the patient persisted. Arrived home, he summoned a distinguished professor from Hanover, who said the bone was not fractured, and made the case the occasion of a lecture to his students on the evils of hasty diagnosis in young practitioners. Dr. Dalton hearing of this wrote the professor of his reasons for his diagnosis, but in such cases the weight of age generally carries the day in the public mind. After a few years the patient died, and Dr. Dalton promptly visited the place and requested an autopsy. A dissection showed a most interesting specimen of this fracture, and the young practitioner wrote his senior the particulars, and closed by saying that it *was* "very important in such cases to avoid a hasty diagnosis."

Space forbids us to cite other interesting anecdotes, or to do more than mention some of the other honored names to be found in this record. Dr. Rufus Wyman practiced for a number of years in Chelmsford, which is spoken of as the "mother town" of Lowell, and thence was called to the McLean Asylum at Somerville as its first superintendent, where he took an active part in planning some of the buildings, even drawing the architectural and working plans with his own hand. He was President of the Massachusetts Medical Society in 1840, and was the father of Drs. Jeffries and Morrill Wyman. Another president of the State Society was Dr. Elisha Huntington, also for eight years mayor of Lowell. Dr. Willard Parker, of New York (still living at an advanced age), was born in Chelmsford, but found chiefly in other cities the opportunities for earning the great name he has borne in surgery. Dr. Henry Kittredge, of Tewksbury, was a member of a family so noted for surgical skill in successive generations, that we are told that several physicians in New Hampshire applied to the Legislature to have their names changed to Kittredge in order thus to acquire the hereditary prestige. His biographer says of him that he made the tincture of common sense an important ingredient in every prescription which he compounded.

Taking these men as a whole we may say of them, in the words of Dr. Nathan Allen: "They inherited talents of a high order, and such was their calling and the circumstances surrounding them that they developed marked characteristics. It is doubtful whether any other city or vicinity in the State, except Boston, can present such a list of medical men. Some eight or ten physicians can be named among them whose equals in point of talent, education, and character it would not be easy to find."

Those who never won great renown outside their own town or neighborhood nevertheless left behind them a fragrant memory, and the work has been a good one, which has helped to preserve for a few years more the record of these faithful lives. To leave such a memory behind one is not an unworthy aim.

EMOTIONAL INSANITY AND THE DEFENSE OF NUTT FOR KILLING HIS FATHER'S MURDERER.

THE trial of Nutt, a young man not yet of age, in Pittsburg, for the deliberate murder of Dukes, who had slandered and outrageously deceived Nutt's sister,

and then killed her father for trying to protect her character, has resulted about as everybody had expected. If Dukes' offense was murder in the first degree, he should have been hanged. His acquittal raised a storm of indignation, to escape which, and, indeed, to save himself from the mob, he was obliged to take to flight. Under the circumstances, after so wretched a miscarriage of justice on the part of the courts, the sympathy of the community would naturally be with the youth who avenged his father's death and his sister's disgrace by killing the murderer of the one and the traducer of the other, a man who otherwise would have been allowed to go at large after having wantonly committed crimes which should meet with summary justice in any civilized community, and the failure to punish which must result in dueling, lynch law, or further crime.

It is unfortunate, however, that such offenses cannot be met by the laws of the land without resort to the plea of emotional insanity, the existence of which it is hard to think could have been believed by the judge and the jury, to the extent of considering it a disease of the mind involving irresponsibility. It is difficult to understand, too, how the medical witnesses could have supposed that in the case in hand there was actual mental unsoundness unless they considered the term emotional insanity to be a mere synonym of righteous indignation and natural passion over an egregious wrong. In either case the result is unfortunate for society. One unpunished crime does not justify another, and no community can long exist except under obedience to law, a disrespect for which has made homicide so common in some of our States in redress for injuries which the courts do not reach. Even that is not the only disastrous result of a verdict which in the least opens the way for another verdict of not guilty of murder by virtue of insanity in which no one believes. It brings medical expert testimony into contempt, and deprives of the reasonable defense of insanity many unfortunate persons, irresponsible, but whose unsoundness of mind is not evident to the lay mind, and who cannot create sympathy.

THE PRESERVATION OF THE ADIRONDACKS.

As a nation we are becoming aroused to the necessity of taking some action to prevent the total destruction of our forests. The mere loss of fuel and timber incident to their destruction is a small matter compared with the effect upon the water supply of potable springs and navigable rivers. The proposed action in regard to the preservation of the Adirondack forests is of more than local interest.

A bill has been introduced into the New York State Senate contemplating the formation of an Adirondack Park, within whose boundaries will eventually be comprised 1,700,000 acres of forest land. Altogether the State now owns about 750,000 acres in the Adirondack region, and of this, about 150,000 acres have reverted to it, for non-payment of taxes, during the past year. Within the next ten years it is believed that at this rate enough land will have reverted to the State to make the park the size contemplated in the bill. The whole is to be put into the charge of a superintendent, whose duty shall be to protect it from depredations. It is a question, however, whether this measure sufficiently provides for the end which it is designed to accomplish, namely, the conservation of the sources of water supply for the upper Hudson and for the streams which feed the canals and fertilize the agricultural lands of the northern part of the State. It is possible that this tract of 1,700,000 acres may not be large enough for the purpose, and even if this is the case, it would seem desirable that the bill should be amended in such a way as to secure the protection of the forests on the 1,000,000 acres which have not yet reverted to the State, since the work of destruction is said to have already gone on to such an extent as to seriously threaten the water supply.

MEDICAL NOTES.

— The *Polyclinic* (January 15th) contains the report of the treatment of two cases of obstinate intermittent fever in the hospital service of Dr. J. Solis-Cohen, by the hypodermic injection of the double salt of muriate of quinia and of urea, in accordance with the suggestion of Dr. Bartholow. Ten grains of the salt (the formula for which is given in the last edition of the United States Dispensatory) was injected at a dose, and the effect on the chills and the malarial cachexia in general was apparently most beneficial.

— The same journal gives an account of the extraction of a leech from the larynx of a man, aged sixty-four years, who had entertained the unwelcome guest for fifteen days before he presented himself at the *Policlinica de la Escuela de Medicina de Sevilla*. The patient was unaware of the cause of the obstinate hæmorrhages, associated with aphonia, constant harassing cough, difficulty of deglution, and great embarrassment of respiration, for the relief of which he consulted Dr. Sota; symptoms which, in connection with the family history of the patient and the history of the attack, led at first to the supposition of phthisis; and, when nothing abnormal was found upon physical exploration of the chest, to the idea of primary tuberculosis of the larynx. But laryngoscopic inspection at once revealed the nature of the case, the leech being seen adherent to the pad of the epiglottis, immediately above the anterior commissure of the vocal bands, extending upward and backward, so that its tail rested on the apex of the right supra-arytenoid cartilage. Notwithstanding the intractability of the patient, whose starts and movements interfered with the first attempts at extraction, Dr. Sota succeeded in removing the animal from its dangerous situation *per vias naturales*. It appears that while overheated and covered with perspiration, the patient had swallowed a draught of cold water, and immediately experienced a constriction of the throat, followed by the symptoms above alluded to, as well as a continual tickling in the larynx.

— A little careful inquiry by the officers of medical organizations would undoubtedly show numerous extravagances which if avoided would leave money suffi-

cient to maintain the *Index Medicus* with scarcely any necessity for relying on private subscription. It is not only the honor of the American medical profession which is at stake, but it is also the practical question of maintaining the present advantage of a general index in our own language, and gotten up in a style which makes it a pleasure to consult its clearly printed pages. — *Polyclinic.*

— The *Medical and Surgical Reporter* calls attention to an insult perpetrated upon the medical profession by the Red Star Line Atlantic Steamship Company, which, contrary to the custom of all other lines, has within the last year ordered its surgeons to mess at the second-class table, and ranks them in other respects as second-class passengers. This is an indignity which has been keenly felt as such by all its medical officers; some have resigned in consequence, others have waited, trusting that the remonstrances of members of the profession to the company would have some effect. So far from this, the Red Star Line has added another insult to the profession by passing over its protests with contemptuous silence. In every line except the above the surgeons are assigned quarters and mess with the first-class passengers.

— The daily press reports 542 suicides for 1883 in Paris, a gain of sixty-three over 1882. The choice of means of death shows that hanging is not as popular as it is in England, for while only eighty-one hung themselves, 217 used firearms, and 148 drowned themselves. By thirty-seven, the more scientific expedient of burning charcoal in closed rooms was adopted.

— The *Gazette* protests against a pupil of the Boston common schools being sent as a messenger by the teacher to a house in which there was contagious disease, and represents the great danger incurred of his carrying contagion into the school on his return. It states that the Board of Health, more than a year ago, called the attention of the School Committee to this practice, and asked that it be stopped, but that the School Committee had declined to take action on the subject.

— Dr. Solomon M. Whipple, of New London, N. H., ex-president of the New Hampshire Medical Society, and a well-known physician throughout the State, is dead, aged sixty-three.

— Rev. R. Heber Newton, in a paper on the Obligations of Society towards the Insane, pleads for schools for the special training of nurses for the insane as follows:—

"If trained nurses are coming to be regarded by our best physicians as indispensable to the proper care of the diseased to-day, how much more necessary are they in the care of the mind diseased! There is needed a knowledge of the symptoms of this most miserable of sicknesses and of the methods of dealing with them, which demands special mental training. There is needed, as well, a power to rule with quiet firmness, a gentleness of tone and manner, a delicacy of thought and feeling which requires a special moral training." "Such an institution," he concludes, "properly founded and conducted, would call to the ministration upon this most pitiful form of misery the talent and character of a superior order of men and women, as always follows from the ennobling of a vocation. Hosts of gentlewomen wait new openings for honorable self-support, and such a vocation would command their refined and sympathetic service with benign results."

NEW YORK.

— At a stated meeting of the County Medical Society, January 28th, Dr. Charles Heitzman read a paper on Recent Researches in Embryology, and Dr. W. G. Wylie a memoir of the late Dr. J. Marion Sims.

— The seventeenth annual report of the State Board of Charities was presented to the Legislature at Albany on the 24th of January. The greater part of the statistics in regard to the insane of the State was previously given in the Governor's message at New Year's. In the visitations to the almshouse in the different counties during the year special attention was devoted to investigating the character and condition of the children in these institutions, and they were found to be generally vicious and depraved. A few were healthy and intelligent, but many were crippled, paralytic, epileptic, idiotic, or otherwise diseased, while the accommodations for their proper care and nursing were, as a rule, totally inadequate. The number of insane, feeble-minded, and otherwise infirm and helpless individuals from outside localities, who had no valid claim on the charities of the State, committed to New York institutions since October 22, 1883, had been 10,965, but under the examinations of the Board the former homes of 6320 of these had been traced to other States and countries, and they had been sent where they respectively belonged. In regard to the immigration and the shipment of chronic paupers and helpless dependents to this country, the Board urges that the prompt return of these classes costs less than their maintenance and care in the asylums, hospitals, and almshouses of the State for three months, and it recommends another small appropriation by the Legislature to continue this work until Congress shall protect the State against the influx and consequent life-long support of chronic foreign paupers pushed upon it through the various sea-ports and by way of Canada.

— At the annual meeting of the Hospital Saturday and Sunday Association, held January 21st, it was stated that the late collections amounted to date to the sum of $40,082.03, but as contributions were still being daily reported the treasurer asked that the books might be left open until February 1st. The secretary reported that 210 churches of various denominations had already sent in their offerings, and that there were about 100 others which had promised to take up collections, the receipts from which would probably amount to about $3000. The year previous only ninety-four churches and chapels contributed.

— The Rev. Dr. Howard Crosby, late chancellor of the University of the City of New York, has published a letter in which he pays the following tribute to the present excellent condition of Bellevue Hospital: My duties have led me to Bellevue Hospital

for the past twenty years, and I am constrained to speak of the vast improvement manifest in every department of that important institution. The order and cleanliness of the wards, the efficiency of the attendants, the skill and faithfulness of the physicians, and the courtesy of all concerned, are fit subjects for praise and pride. But above all the admirable work of the trained nurses should be recognized and commended. These refined ladies, full of enthusiasm and devotion, and ably prepared for their responsible duties, are angels of mercy to the sick and suffering, and their tender regard for the patients is itself a healing balm. . . . There was a time when thoughts of Bellevue were not savory, but now I know no place where I should rather be an invalid to receive the wise and gentle attention of experienced and sympathetic guardians.

Correspondence.

THE TREATMENT OF HIP-JOINT DISEASE. EXTENSION BETTER THAN EXCISION.

MR. EDITOR, — I was much interested in the discussion in your journal upon excision of the head of the femur in hip-joint disease. I must acknowledge, however, that I was somewhat surprised to find that the operation was advocated and so often practiced as was represented during the discussion.

I had supposed that since my introduction of the treatment of diseases of the joints by elastic or continued extension that there had been no occasion for excision of the head of the femur.

As to the frequency of this disease of the hip proving fatal, at the present time, it was entirely new to me. It certainly is at variance with my experience in the treatment of such cases, so much so as to render it difficult for me to realize its possibility, taking it for granted that the treatment was by the present received mode, both in this country and in Europe.

Some thirty years since I began the treatment of joint diseases by continued extension, and between the years 1850 and 1860 published in the medical journals many papers upon the subject, endeavoring to so bring my method of treatment before the profession that they could understand its principles, and thus be enabled to apply the treatment correctly, and obtain the favorable results that had followed it in my hands.

In giving the results of the treatment of hip disease, as practiced by me for so many years, I am embarrassed by the feeling that my statements will be distrusted by the gentlemen engaged in the discussion, when they compare them with their experience. I can say, without equivocation, that among the *vast* numbers that have been under my care, *not one* has succumbed to the disease; and that in those cases that came under my care in the early stages they recovered without deformity or lameness. After the head of the bone has been partially destroyed, it cannot be expected that the treatment will restore it, although the disease was arrested at once by the treatment.

This mode was so fully described in my work entitled Conservative Surgery, that it would seem superfluous to describe it here, yet there are some points that appear not well understood, or at least not fully appreciated, that are essential to good success.

I will mention first the use of the short splint, where the adhesive straps take hold only of the thigh. The short splint was used by me and discarded some time before Otto & Rynders brought out the one that is called Dr. Sayre's splint. I found that the limb would always shorten while wearing it, for the skin of the whole body above will elongate by the traction, thus allowing the limb to steadily shorten. It does not *stop* the destruction of the parts, only retards it, inasmuch as it removes the pressure.

My adhesive straps were not only applied to both sides of the whole length of the limb, but two strips commenced at the outer maleolus and wound around the limb, taking hold of the strip upon the inside of the limb, also compressing the muscles in the calf of the leg, also of the thigh, where extension was made by the long splint. This arrangement of the strips gives a sure hold of the limb, one that will not yield.

Again there is an important, I may say an all important, difference in the perineal band used by me and other instruments. In all the splints that have come under my observation, they are made with only one band, and that for extension alone, whereas in my instruments there is an outside inelastic band, which, after the extension is made and the outside inelastic band is buckled tight, prevents the retraction or shortening of the limb either by the contraction of the muscles or by the weight of the body. When the short splint is used the recovery, as a rule, is very much like that without treatment, except, perhaps, the position of the limb and the freedom from suffering.

Now if you want a speedy, and at the same time a perfect recovery, perfect considering the freedom from the loss of parts when the treatment commences, you must not allow the head of the bone to impinge upon the upper part of the acetabulum, as this contact is liable, if it remains for any length of time, to destroy all that has been gained before. The bony parts involved can never heal so long as they come in contact, as it is this pressure that keeps up the destruction of the parts.

Some of the speakers advised free opening of the abscesses.

Before the adoption of my treatment I had seen abscesses opened, followed by hectic fever, night sweats, and death. Since the adoption of my plan of treatment there has never been an unpleasant symptom following the opening of an abscess, however reduced the patient or unpromising the constitution.

After opening the abscess and discharging the contents I have washed it out with warm water, syringing it two or three times, then injecting chlorine water two or three times according to the sensibility of the sac. I introduce a small tent to keep an opening, and apply a compress. In this way the walls of the sac unite, leaving only a sinus for the discharge of the pus from the diseased bone. This reduces the discharge to a very small quantity, so small as not to affect the health or retard the recovery.

In this connection allow me to ask what will destroy the patient? He can eat, drink, and sleep well, and have not enough discharge to affect his health.

Some spoke of anchylosis being the most favorable result, and the one to be sought for in treatment.

So far as my experience goes this never takes place between ulcerated surfaces of bone. A fixed state of the joint caused by a shortening of *all* the soft parts connected with the femur at the joint is what is generally termed anchylosis. I have yet to see a case

where there is bony union. I have produced free motion after this fixture of the joint for seventeen years, accomplishing it without pain or suffering; doing it in the same way that I have reduced dislocations of the hip of twelve years' standing.

HENRY G. DAVIS, M. D.

NEWTON, MASS. (formerly of New York City).

Miscellany.

PREGNANCY AND MORPHINISM.

DR. FÉRÉ (*Revue Médicale*, November 17, 1883) gives an account of the case of a young woman addicted to the opium habit to the extent of subcutaneous injection of twenty-four centigrammes of morphia daily, who came to Paris when six months pregnant to be cured of her habit. The case was difficult for the reason that as soon as the daily dose was diminished by a half a centigramme, violent uterine colic ensued which threatened to bring on miscarriage. However, with great precautions, times of cessation of treatment, and even a temporary return to stronger doses when the uterine contractions became too marked or the fœtal movements were violently increased, the daily dose of morphia was reduced almost one half, and on the day of confinement, May 6th, the patient only took thirteen centigrammes. The labor, conducted by M. Tarnier, was natural. During the next eight days the allowance of thirteen centigrammes was given daily. But on attempting to resume the reduction, there were renewed uterine contractions with suppressed lochia. It was necessary to temporize as before, but on the 3d of June the patient was taking only eight centigrammes. At this point the injections were abruptly stopped. There was violent colic, nausea, and diarrhœa. But after a few days they ceased, and the patient was finally cured of her habit, the cure remaining permanent.

Dr. Féré insists on two interesting points: In the first place the necessity of proceeding to demorphinize pregnant patients only with the greatest precautions against setting up uncontrollable uterine contractions and premature labor, to say nothing of other accidents which may be caused in the mother. Secondly, the necessity for moderation in the process is not less for the sake of the fœtus, which undergoes disturbance and convulsions in the womb when deprived suddenly of the stimulant to which it has become accustomed. The fœtus after birth may also suffer from the sudden demorphinization accompanying the change in its condition, and the writer thinks it may be proper in certain cases to pursue for the sake of the child the use for a time after birth of the morphia, which it could not safely be at once and wholly deprived of.

A CASE OF PLAGIOMICROCEPHALIA.

THE *London Medical Record* (December, 1883) contains a case of asymmetrical microcephalia accompanied by remarkable anomalies of the motor system. A similar case is to be found in the May issue of the same journal. The former case is from *Vratch*, and is as follows: —

Dr. M. Lukin, of Cronstadt, publishes the detailed post-mortem description of a microcephalic boy, aged four. The antero-posterior diameter of the head was twelve centimetres, the transverse nine and a half, the diagonal fifteen. The skull had a dolichocephalic form, and was markedly asymmetric (more developed on the right than on the left side). The cranial bones were thin, with very scanty spongy substance. The brain weighed only 420 grammes. [In Rudanovsky's case, says the reporter, in the Proceedings of the St. Petersburg Society of Psychiatres, 1880, it weighed 258.72 grammes in a patient aged seven years and eight months; in Professor Merzejewski's case 369.053 in a patient aged sixty; in Theile's 300 in a patient aged thirty; in Sander's 372.444 in a patient aged eighteen.] The measurements of the brain were these: The length of the hemispheres was ten centimetres; their height in the middle 5.3; their breadth at the level of the parietal lobes nine; the length of the frontal lobes, six; of the occipital 1.8; of the cerebellum 4.5; the breadth of the latter seven; its height 3.7. Two centimetres of the length of the cerebellum remained free, that is, were not covered by the occipital lobes. On the left side there were absent the anterior part of the fissura olfactoria, the whole gyrus rectus, fissura transversa (between the fissuræ supraorbitales longitudinales), gyrus frontalis medius, gyrus uncinatus, fissura parieto-occipitalis, and fissura præcentralis superior. On the right side the fissuræ transversa and calcarina were absent. On both sides the lobuli paracentrales, quadrati, and cuneiformes were very narrow and very indistinctly separated one from another. During his life the boy presented the following phenomena: He was very cross and violent; in fits of anger he bit his own hands or everybody who interfered with him; he did not learn to speak; he asked for food by gestures; he was not able to take his food by himself (though he swallowed well); he invariably refused to drink; he began to walk at about two years of age; up to his very death he invariably walked only backwards, notwithstanding all his mother's efforts to teach him the normal walk. According to Dr. Khrabrostin, who on two occasions saw the patient with his curious method of locomotion, the boy usually backed pretty rapidly, always carrying his head thrown far backwards.

TYPHOID AND MALARIAL FEVERS IN CONNECTICUT.

IN regard to the prevalence of typhoid and malarial fevers during the month of October the secretary of the Connecticut State Board of Health reports as follows: —

The weather has apparently been favorable to the development of malarial fevers, and an increased prevalence is quite generally reported. While perhaps rather more cases of intermittent fever, that is, acute tertian ague, have been seen this season than for several years in the districts where malaria has been prevalent for some time, yet the prevalent type generally is the typho-malarial and the less clearly defined varieties of malarial diseases. Typhoid fever, although steadily increasing in frequency, does not apparently so completely to drive out malaria as malaria appeared to drive out typhoid fever when it first commenced to extend over the State, so that for years not a case of typhoid fever occurred over large areas, and it lost place among the ten principal causes of death throughout the State.

That the decreased frequency of typhoid was entirely independent of the malarial invasion now is quite clear.

The return of typhoid is also not dependent upon the decrease of malarial diseases, as we see it side by side with all varieties of ague, not only where the latter has longest remained as one of the regular diseases of the region, but also where malarial diseases are entering territory hitherto never occupied, so far as human knowledge can determine, by any form of ague; and also where having existed quietly for several years malarial diseases become epidemic, leaving but a small percentage of the people unaffected. The subject is too complicated to discuss here, but the increased frequency of both malarial diseases and typhoid fever are interesting features.

HALLUCINATIONS FROM SALICINE.

A WRITER in the *Australasian Medical Gazette* (November, 1883) gives an account of some mental phenomena following large doses of salicine, which, though not entirely unknown heretofore, are sufficiently unusual to be interesting, and were, moreover, recorded as the observations of a medical man on his own person. A peculiarity of this case was the perception of a number of musical airs, in a regularly recurring order, but having no objective reality. The writer says: —

"On July 9th I took to my bed with, as I thought, a slight attack of acute rheumatism. I treated myself (not liking to trouble Dr. ——) with alkalies, lemons, and entire abstinence from alcohol. I remained in bed for all the week, and, not getting much better, commenced to get very anxious about my practice, and determined to try salicine in large doses, such as I have frequently seen mentioned in the *Lancet*, although I had never given it quite so heroically to patients. Accordingly, on Sunday, July 15th, I took four doses, at intervals of only two hours, of forty grains of salicine in each dose. It made me drowsy, and I slept most of the afternoon. Just after dark I awoke, and found myself apparently mad, and yet conscious of my own madness. There seemed to be all sorts of people about me and in the room, and yet I was conscious that they were fanciful creations of the mind, and had no fear or dread of them. They were all, so far as I can recollect, human in appearance, and all strangers to me. The music had now commenced, and it was so natural that I said to my wife that I had never heard (it was Sunday night) the church music so far off before. The music gradually got louder and more defined, until it settled down to one perpetual repetition in regular order — much after the fashion of a musical box — of a certain six airs, one of which had a choral accompaniment, the human voices being perfectly distinct and audible. Only one of the airs was known to me, namely, 'Scenes that are Brightest,' from Maritana. All the others were strange. I am not a musician, but I know enough to be sure that the time kept was perfect. This lasted for forty-eight hours, and I was nearly mad in reality at the end of that time from the constant apparent noise and din. The chloral did me some good, but immediately on awakening from a deep chloral sleep *my band*, as I got to call it, would begin again. It gradually wore away on the third day, but for some days afterwards I occasionally heard one of the tunes, and perhaps part of another. I was, throughout, much interested in all the symptoms, and recognized from the first what had happened, and that the salicine was to blame, but I was uncertain how the case might end. I have had a long and slow convalescence, suffering a great deal from occasional pains and great weakness, and am now slowly coming round."

PAROVARIAN CYSTS.

DR. GOODELL recently exhibited two cysts of the parovarium before the Obstetrical Society of Philadelphia (*Medical and Surgical Reporter*, January 5th). Both patients got well; he indeed had never lost a patient from whom he had removed a parovarian cyst. In both cases a correct diagnosis was made previous to the operation. Regarding the differences between this tumor and the cyst of the ovary, he remarked that one interesting diagnostic point was the complete absence of the *facies ovariana*. The color in the cheeks was good, and the countenance was free from the anxious expression present in cases of ovarian tumor. One tumor had existed for ten years, the other for one. Another important point in the differential diagnosis is not only the flaccidity of the tumor but its variable degrees of flaccidity. Upon inspection, it is seen to reach to the sternum, and seems to occupy a large portion of the abdominal cavity, but where the hands are placed upon its sternal edge it can be compressed to the level of the umbilicus. An ovarian cyst, on the contrary, is hard and uncompressible. Exceptions to this rule are very rare, that is, either a tense parovarian cyst or a flaccid ovarian one. A third important distinguishing point is the long time — ten years in one case — which the tumor existed, and further, without marked deterioration of health. After being tapped these tumors usually refill, but occasionally they do not, and a cure is thus brought about. The fluid withdrawn has been in every case limpid and generally colorless, but it has sometimes had in his experience an emerald tint. These tumors are generally free from serious adhesions, but if, in an operation for the removal of one, adhesions should exist where for any reason their forcible separation would be unadvisable, or the cyst were intra-ligamentous, he would not hesitate to leave the adherent portion of the cyst wall, or the whole cyst itself, after making a big hole in it, as the fluid it secretes is bland and unirritating to the peritonæum.

Any one examining one of these cysts for the first time would consider it to be of ovarian origin, for it is only by patient search that the ovary can be found spread out over the cyst wall. The microscope will decide with certainty in any otherwise doubtful case. The tumor is covered with a beautiful net-work of veins.

When a cyst of the parovarium exists on one side, the ovary of the opposite side is usually found to be diseased and should be removed. In these cases the remaining ovary was seen to be enlarged, and the site of a small ruptured cyst was pointed out. The Fallopian tube was also enlarged, and the terminal vesicle of the Fallopian tube, or the hydatid of Morgagni, was enlarged and cystic. This hydatid sometimes attains the size of an orange, and often ruptures spontaneously without any bad effects. A few years ago one of these small cysts ruptured while he was making an examination of the patient to ascertain its character.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 19, 1884.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	560	181	14.76	20.46	.54	5.58	2.52
Philadelphia	846,984	376	137	15.12	11.76	2.68	6.21	3.24
Brooklyn	566,689	255	98	12.48	19.89	.78	5.85	.78
Chicago	503,304	190	71	21.20	13.25	3.18	8.48	4.24
Boston	362,535	186	53	18.90	18.36	2.16	7.56	2.16
St. Louis	350,522	146	—	22.08	24.84	1.38	13.11	—
Baltimore	332,190	183	75	18.15	10.34	1.11	6.05	1.66
Cincinnati	255,708	—	—	—	—	—	—	—
New Orleans	216,140	135	29	14.80	9.62	—	5.18	.74
District of Columbia	177,638	111	47	25.23	22.52	.90	2.70	4.80
Pittsburg (1883)	175,000	58	23	17.01	11.34	1.89	5.67	7.56
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	46	19	21.74	21.74	2.17	4.34	4.34
Providence (1883)	116,755	38	8	7.89	7.89	—	2.63	2.63
New Haven (1883)	73,000	23	4	13.05	—	4.35	4.35	—
Charleston	49,999	32	11	15.65	6.26	—	—	—
Nashville	43,461	17	5	11.76	23.52	5.88	—	—
Lowell	59,485	30	7	3.33	33.33	3.33	—	—
Worcester	58,295	21	6	19.04	9.52	4.76	9.52	—
Cambridge	52,740	29	11	17.25	10.35	—	3.45	3.45
Fall River	49,006	22	5	9.09	—	—	4.54	4.54
Lawrence	39,178	17	5	29.40	11.76	5.88	11.76	11.76
Lynn	38,284	14	3	14.28	7.14	7.14	—	—
Springfield	33,340	8	4	37.50	—	—	25.00	—
Salem	27,598	9	3	11.11	—	—	11.11	—
New Bedford	26,875	8	0	12.50	12.50	12.50	—	—
Somerville	24,985	7	4	28.56	—	14.28	14.28	—
Holyoke	21,851	11	3	—	—	—	—	—
Chelsea	21,785	10	3	20.00	—	—	20.00	—
Taunton	21,213	12	2	25.00	16.66	—	—	—
Gloucester	19,329	6	2	50.00	—	—	16.66	—
Haverhill	18,475	3	1	33.33	—	—	33.33	—
Newton	16,995	5	1	—	20.00	—	—	—
Brockton	13,608	5	1	—	20.00	—	—	—
Newburyport	13,537	6	1	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	6	3	16.66	33.33	—	—	—
Seventy-four Massachusetts towns	284,874	89	14	14.61	—	—	6.74	1.12

Deaths reported 2574 (no reports from Cincinnati and Buffalo): under five years of age, 840: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 430, consumption 432, lung diseases 407, diphtheria and croup 164, scarlet fever 66, typhoid fever 40, measles 38, diarrhœal diseases 34, malarial fever 25, whooping-cough 21, puerperal fever 19, cerebro-spinal meningitis 11, erysipelas nine, small-pox two, yellow fever one. From *measles*, District of Columbia 13, Baltimore 11, New York five, Pittsburg three, Brooklyn and Chicago two each, Charleston and Nashville one each. From *diarrhœal diseases*, New York eight, Boston six, New Orleans five, Philadelphia four, Baltimore and Charleston two each, Brooklyn, District of Columbia, Providence, New Haven, Cambridge, Lynn, Springfield, and North Adams one each. From *malarial fever*, New York and St. Louis seven each, New Orleans five, Brooklyn, Chicago, and Baltimore two each. From *whooping-cough*, New York six, District of Columbia three, Brooklyn, New Orleans, and Cambridge two each, Philadelphia, Chicago, Boston, Gloucester, North Adams, and Arlington one each. From *puerperal fever*, Boston and Milwaukee four each, St. Louis three, Philadelphia, Chicago, Baltimore, and Charleston two each, New York one. From *cerebro-spinal meningitis*, New York three, Chicago and District of Columbia two each, Philadelphia, Boston, Milwaukee, North Adams, and Dedham one each. From *erysipelas*, New York three, Philadelphia two, Brooklyn, Chicago, Boston, and Gloucester one each. From *small-pox*, Philadelphia and St. Louis one each. From *yellow fever*, New York one.

One case of small-pox was reported in Holyoke; scarlet fever 41, diphtheria 30, typhoid fever 14, and measles three in Boston.

In 92 cities and towns of Massachusetts, with an estimated population of 1,285,557 (estimated population of the State 1,922,530), the total death-rate for the week was 20.00 against 18.00 and 17.41 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending January 5th, the death-rate was 22.2. Deaths reported 3731: acute diseases of the respiratory organs (London) 387, scarlet fever 112, measles 100, whooping-cough 103, fever 51, diphtheria 30, small-pox (Birmingham eight, Sunderland seven, London and Liverpool six each, Manchester one) 28. The death-rates ranged from 12.1 in Norwich to 31.3 in Cardiff; Bradford 17.7; Nottingham 19.1; London 21.6; Birmingham 21.9; Sheffield 23.8; Liverpool 23.9; Leeds 26.5; Manchester 29.1. In Edinburgh 21.8; Glasgow 29; Dublin 28.7.

For the week ending December 29th, in 162 German cities and towns, with an estimated population of 8,472,338, the death-rate was 24. Deaths reported 3912; under five years of age, 1812; consumption 542, lung diseases 447, diphtheria and croup 281, diarrhœal diseases 118, scarlet fever 66, whooping-cough 60, measles and rötheln 58, typhoid fever 53, puerperal fever 25, small-pox (Schwerin one) one. The death-rates ranged from 12.8 in Wiesbaden to 32.1 in Leipzig; Königsberg 26.6; Breslau 30.4; Munich 25.8; Dresden 22; Berlin 23.5; Hamburg 29.5; Cologne 18.9; Frankfort a. M. 15.2; Strasburg 29.7.

For the week ending January 5th, in the Swiss towns, there were 26 deaths from lung diseases, consumption 25, diphtheria and croup 13, diarrhœal diseases seven, whooping cough four, typhoid fever four, scarlet fever three, puerperal fever three, measles one, erysipelas one. The death-rates were, at Geneva 19.5; Zurich 22; Basle 16.7; Berne 29.4.

The meteorological record for the week ending January 19th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Jan., 1884.	Daily Mean.	Daily Mean	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7. 23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 13	29.842	26	38	9	61	37	66	61	N	SW	SW	6	15	20	C	I	O	—	—
Mon., 14	29.859	33	42	24	85	50	72	69	SW	W	N	19	16	8	T	C	H	—	—
Tues., 15	30.179	19	27	15	70	48	56	58	NW	N	NW	11	8	10	O	O	O	—	—
Wed., 16	30.368	13	18	6	57	51	70	59	NW	W	W	14	8	10	C	C	C	—	—
Thurs., 17	30.177	22	27	11	70	67	64	67	W	SW	SW	10	15	14	F	C	O	—	—
Fri., 18	29.916	34	42	26	59	43	68	57	SW	SW	NW	15	14	4	O	C	C	—	—
Sat., 19	29.890	21	34	12	84	96	80	87	N	N	N	5	21	16	S	S	O	—	—
Mean, the Week.	30.033	24	34	15				65										18.40	.53

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JANUARY 26, 1884.

ANDERSON, F., passed assistant surgeon, granted leave of absence for six months.

WHITING, ROBERT, passed assistant surgeon, detached from the Naval Hospital, Norfolk, and ordered to the U. S. Receiving Ship Colorado, New York.

FITTS, H. B., assistant surgeon, detached from the U. S. S. Jamestown and ordered to U. S. Coast Survey Steamer Gedney.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, OCTOBER 1, 1883, TO DECEMBER 31, 1883.

BAILHACHE, P. H., surgeon. Relieved from duty at Cape Charles Quarantine Station. October 13, 1883.

Detailed as member of board to examine candidates for promotion. October 30, 1883.

Granted leave of absence for thirty days. November 27, 1883.

HUTTON, W. H. H., surgeon. Granted leave of absence for twenty days. October 1, 1883.

WYMAN, WALTER, surgeon. Detailed as member of board to examine candidates for promotion. October 30, 1883.

To proceed to Norfolk, Va., to investigate the conduct of the service at that port. December 31, 1883.

LONG, W. H., surgeon. Leave of absence extended ten days. October 26, 1883.

MURRAY, R. D., surgeon. To proceed to Ship Island Quarantine Station. October 17, 1883.

To inspect sites for quarantine stations. November 30, 1883.

Granted leave of absence for twenty days. December 18, 1883.

SMITH, HENRY, surgeon. Granted leave of absence for twenty-five days on account of sickness. October 13, 1883.

Relieved from duty at Norfolk, Va. October 17, 1883.

To report to Surgeon Sawtelle, at New York, for temporary duty. November 27, 1883.

Relieved from temporary duty at New York and placed on waiting orders. December 31, 1883.

FISHER, J. C., passed assistant surgeon. When relieved by Assistant Surgeon Banks to proceed to New York for duty. October 29, 1883.

Granted leave of absence for thirty days. November 28, 1883.

GOLDSBOROUGH, C. B., passed assistant surgeon. Granted leaves of absence for thirty-two days on account of sickness. October 12, October 20, and November 1, 1883.

IRWIN, FAIRFAX, passed assistant surgeon. To proceed to Norfolk, Va., and assume charge of the service, relieving Assistant Surgeon Glennan. October 16, 1883.

MEAD, F. W., passed assistant surgeon. To proceed to Portland, Oregon, inspect the service, and report the condition of Assistant Surgeon Devan. December 5, 1883.

To return to station, Port Townsend, Washington Territory. December 18, 1883.

COOKE, H. P., passed assistant surgeon. To proceed to Charleston, S. C., for duty. November 27, 1883.

BANKS, C. E., assistant surgeon. Detailed for temporary duty at Georgetown, D. C. October 11, 1883.

Granted leave of absence for thirty days. October 12, 1883.

BENNETT, P. H., assistant surgeon. Placed on waiting orders. December 15, 1883.

Granted leave of absence for thirty days. December 22, 1883.

Upon expiration of leave of absence to proceed to Detroit, Mich.. for duty. December 29, 1883.

PECKHAM, C. T., assistant surgeon. To proceed to Wilmington, N. C., and assume charge of the service, relieving Passed Assistant Surgeon Irwin. October 16, 1883.

DEVAN, S. C., assistant surgeon. Granted leaves of absence for ninety-five days on account of injury and sickness resulting therefrom. November 15, December 5 and 22, 1883.

BEVAN, A. D., assistant surgeon. To proceed to Portland, Oregon, and assume charge of the service. December 29, 1883.

GLENNAN, A. H., assistant surgeon. To proceed to New Orleans, La., for duty. October 17, 1883.

WASDIN, EUGENE, assistant surgeon. To proceed to Mobile, Ala., for temporary duty. October 11, 1883.

To proceed to Galveston, Texas, for temporary duty. November 17, 1883.

PROMOTIONS.

BENSON, J. A., passed assistant surgeon. Promoted and appointed passed assistant surgeon, by the Secretary of the Treasury, from October 1, 1883. October 4, 1883.

BANKS, C. E., passed assistant surgeon. Promoted and appointed passed assistant surgeon, by the Secretary of the Treasury, from November 1, 1883. November 6, 1883.

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting of the Society will be held in the Medical Library Rooms, on the second Thursday of February, at four o'clock P. M. F. S. Billings, D. V. S., will read a paper upon Eclampsia in Woman and in the Cow. Profession invited.

HENRY M. FIELD, M. D., *Secretary*.

BOOKS AND PAMPHLETS RECEIVED. — The International Encyclopædia of Surgery. A Systematic Treatise on the Theory and Practice of Surgery by Authors of Various Nations. Edited by John Ashhurst, Jr., M. D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with Chromo-Lithographs and Wood-Cuts. In Six Volumes. Vol. IV. New York: William Wood & Company. 1884.

Transactions of the American Surgical Association. Volume the First. Edited by J. Ewing Mears, M. D., Recorder of the Association. Philadelphia: Printed for the Association, and for sale by Presley Blakiston & Co. 1883.

The Influence of the Commercial Prosperity of the Country on Epidemics. By Harvey E. Brown, M. D., Surgeon U. S. A. The Annual Oration before the New Orleans Medical and Surgical Association for 1883. (Reprint.)

Original Articles.

CEREBRO-SPINAL MENINGITIS. FIVE CASES. ONE, OF THE FULMINANT (FOUDROYANT) TYPE, TREATED BY SUBCUTANEOUS INJECTION OF APOMORPHIA, MORPHINE, AND ATROPINE; RECOVERY. ONE AUTOPSY.[1]

BY A. L. MASON, M. D.

November 13, 1881. G. H., a healthy young gentleman of twenty-one, was seized without premonition, immediately after a hearty dinner, during which he had been in his usual spirits, with sudden vertigo. He staggered with assistance to a sofa, and became unconscious, with pallid countenance, clammy skin, and no pulse. I saw him fifteen minutes later, at 8.45 P. M., when the condition was as follows: semi-conscious, eyes vacant, pulse 70 of fair strength, breathing shallow, skin moist, hands and feet cold. Movements indicated that there was pain or distress in the head and cardiac region. In a few minutes convulsive shivering and twitching of the lips and jaw were observed. Ammonia was applied to the nostrils and hot bottles to the extremities. An attempt to swallow brandy and water caused a convulsion of great severity, the muscles of the neck, back, and thorax being in a state of prolonged contraction, with upward rolling of the eyes and clenching of the jaws. The breathing stopped, the heart became feeble, there was cyanosis and, apparently, impending asphyxia, which was averted by the gradual relaxation of the spasm. These convulsions recurred in rapid succession, and seemed to be very exhausting. The friends could assign no possible cause for the symptoms. The patient had never had a similar attack; there was now no frothing at the mouth, paralysis, or vomiting. There had been no previous complaint of any discomfort whatever up to the moment of attack; uræmic or irritant poisoning seemed improbable; cerebro-spinal meningitis was not prevalent, and it was not until the following day that a probable diagnosis could be arrived at.

The state of the patient was critical, and I immediately sent for Dr. J. Collins Warren to consult with me, requesting him to bring a stomach pump and ether. Dr. Warren came at 9.30 P. M., one hour after the beginning of the attack, and he also brought some apomorphia, which proved to be of the greatest possible service. The patient, who was a large, heavy man, was with difficulty carried up to bed, mustard was applied to the extremities, and ether was administered. The latter was found to be of no use, as the convulsions were excited to an alarming extent by the first inhalations. At 10.30 P. M. one sixth of a grain of muriate of apomorphia was injected under the skin, and in eight minutes the stomach was emptied, without retching, as if it had been turned inside out. A basinful of solid food, quite unchanged, was evacuated. Relief followed. The face, which had been congested, became pale, free perspiration ensued, the convulsive action subsided, the pulse was 72, and the patient rested quietly until five A. M. without further treatment.

November 14th. At nine A. M. there was a return of convulsions of the same type. The patient was unconscious; face dusky, pupils dilated, head drawn back, with rigidity of cervical muscles. There was inability to swallow and retention of urine. A pint, normal in character, was drawn by catheter.

At 11.30 A. M. Dr. Warren again saw the patient in consultation. It was determined that he was suffering from cerebro-spinal meningitis, and a guarded prognosis was given.

The bowels were emptied by a large stimulating enema, six grains of calomel were given, ice was applied to the head, and leeches to the nucha. The leeches and ice were of no benefit, however, because their application caused general convulsions, with opisthotonos, and after a few minutes it was evident that the subcutaneous injection of morphia was the only remedy likely to prove of any value. The patient was kept constantly under its influence, one eighth grain of morphine combined with one one hundredth of atropine being given at varying intervals for many days. Owing to the inability to swallow, nutritive enemata of milk, beef-tea and brandy were given every three hours. Bromide of potassium was also administered by the rectum. The calomel acted once.

November 15th. Drs. Borland, Warren, and William Appleton saw the patient in consultation. Dr. Borland, who had been the family physician for many years, concurred in the diagnosis and treatment. The condition thirty-six hours after the attack began remained about the same. But the convulsions were partially controiled, the enemata were retained, the kidneys secreted about two pints of normal urine daily, which was drawn by catheter, there was a good pulse of 85, and little or no fever. Still the condition was dangerous, and during the following days Dr. Warren met me frequently in consultation. After the first forty-eight hours the patient was placed under the constant medical care of Dr. Charles P. Strong, who for twelve nights gave him the benefit of much judicious attention, which contributed greatly to his recovery. From Dr. Strong's notes I make the following extracts regarding the progress of the case: —

November 15th, third night. The convulsions were recurring in series of three or four, with several hours' intermission, with less severity, but the muscles of the face, neck, and extremities were in a state of constant spasm, producing twitching movements, which were, however, to a great extent under the control of morphine.

The sensibility to external impressions had become very great, sudden admission of light, shutting the door, and the like, producing convulsions. There was hyperæsthesia of the whole body, most marked over the cervical vertebræ however, where the slightest touch produced a spasm.

Pulse, temperature, and respiration were normal, but the pupils were widely dilated. Slight epistaxis. Nourishment was given by enema. Subcutaneous injections of morphine, grain one eighth, atropine grain one one hundredth, were required at eleven A. M., 2.45 and ten P. M.

During the third day the patient swallowed two ounces of milk by teaspoonfuls, though showing no other consciousness.

November 16th. Aside from two convulsions produced by enemata the night was passed very quietly. Hyperæsthesia of the neck was fully as marked as on previous days, and several convulsions were induced by the patient's putting his hands on that region. The pupils were a little less dilated than on the preceding days, and pulse and temperature both normal.

[1] Read before the Boston Society for Medical Improvement, January 28, 1884.

Bromide of potassium was given in twenty-grain doses, and to the amount of a drachm and a half daily during the rest of the sickness, being omitted sometimes because of bromism, which was readily induced. Nourishment was given through a soft rubber tube, around which the patient's lips were held. There were no convulsions between eight A. M. and 2.30 P. M., or 2.30 and 10.30 P. M. Temperature 99°; pulse 65.

Subcutaneous injections of the same amount as yesterday were given at 4.30, 8, and 10.30 A. M. 2.30 and 10.30 P. M.

November 17th. There were but two convulsions during the night, and the muscular twitchings were much less marked. Considerable nourishment had been taken, and the patient's general appearance was improved. There seemed at times a semi-conscious condition, as shown by the patient opening the mouth when told, smacking his lips in a peculiar manner when he wanted water, and at such times refusing to drink anything else. He could close his lips around the tube when it was put in his mouth without requiring them to be held. His pulse was stronger and temperature still normal.

Subcutaneous injections were given at 10.30 A. M. and 9.30 P. M.

November 18th, fifth day. There had been an intermission of fourteen and one half hours without convulsions, most of the time the patient sleeping quietly, but at two P. M. a series of very violent ones began, requiring morphine frequently. As the patient continually put his hands upon his abdomen, and some flatus was noticed, it was thought that an enema might produce a more comfortable condition, but no sooner was the tube inserted than there were convulsions of as severe a type as he had on the first night. The whole body would become rigid, then the head and knees would approach until nearly touching, when, suddenly, he would throw himself into complete opisthotonos, and lie so until the face became livid, when relaxation took place. There were four of these convulsions, with about two minutes' interval between before the subcutaneous injection, which was at once given, produced its effect.

After lying about two hours in a perfectly exhausted condition, his temperature meanwhile rising to 100.2° F., he began to talk with perfect distinctness. These were the first articulate sounds he had made since the commencement of his sickness. The words were perfectly intelligible and the sentences well arranged, but his ideas were all terrible delusions. He saw strange and frightful animals about, whose attacks he tried in vain to ward off, but they always bit his head; he was caught in the sands, and the tide was rising around him; his head was bound with hot irons, etc. He remained in this condition of delirium nearly all night, but as the morphine took effect his fancies became more pleasant. The head and limbs were in constant motion until he fell asleep, towards morning. Pulse 58.

Subcutaneous injections at 2, 4.15, 6.15, 9.30, and 11 P. M.

November 19th. When he awoke he was in the same lethargic condition as before the delirium, but this soon passed away, and his delusions returned; yielding, however, more readily to morphine. The temperature was 101° F.; pulse 60. There were no convulsions until evening, then but two slight ones, and he passed the night more quietly and naturally than any previous one.

Subcutaneous injections at 1.45 and 8 A. M., and at 8 P. M.

November 20th, seventh day. When he woke he recognized his relatives, who were in the room, but did not speak to them. He took full amounts of nourishment, and appeared perfectly conscious of his surroundings, dozing at intervals during the day. In the evening, without apparent cause, there was a very severe convulsion, after which the customary delirium. When asleep there was absence of those muscular twitchings which were present during most of the waking hours, and were especially induced by any excitement, however trivial, such as drinking, etc.

Subcutaneous injections at 3.15 and 11 P. M.

November 21st, eighth day. During the night he complained of pain in the front of the head, but said this had passed away in the morning. He was perfectly rational, knew and spoke to those about him, inquired the day of the week, and, when told, said, "I've been sick only a day then." He slept much during the day, but at night grew very restless. No morphine given.

November 22d, ninth day. Perfectly rational during the day. Micturition and defecation voluntary for the first time. Although perfectly quiet through the day, at night he was very restless. No morphine given.

November 23d. After a restless night the temperature was 103° F., pulse 90, and the general condition worse. The muscular twitching returned, and he lay in a lethargy so deep it was impossible at times to rouse him for nourishment.

Subcutaneous injections at 5.45 A. M. and 8 P. M.

November 24th. During the night the skin became moister, and he was greatly improved when he woke in the morning. The same condition of nervous excitement returned at night, although he slept a great deal during the day. Yawning was quite a noticeable symptom. Pulse was 78, temperature 100.4° F.

Subcutaneous injections at eight and eleven P. M.

November 25th. Complained of pain in the head, especially in front, and passed the day in the same somnolent state, growing restless towards evening. Epistaxis.

Subcutaneous injections at nine and ten P. M.

November 26th. Pulse 66, temperature 99° F. Epistaxis. Patient was very much improved, sleep was natural, and nourishment was taken freely. The history of succeeding days was that of steady convalescence, the only point of interest being the pulse, which remained below 60 for some time, and then gradually rose to its normal rate.

December 7th. Convalescence, beginning at the end of the second week, was interrupted in the middle of the fourth week, after the patient had been about the house for some days and out of doors once, by a return of convulsions, in a less severe form, accompanied by dilated and insensible pupils, and followed for two or three days by moderate fever, restlessness, and debility. The patient complained of renewed pain in the head, neck, abdomen, præcordia, and legs. The cervical muscles were contracted, there was intolerance of light, frequent spasmodic twitching of the face, lips, and arms, coated tongue, and a sluggish mental state as before, with active delirium at night. The subcutaneous injection of morphine was resumed, and the services of Dr. Strong were again needed for three nights, after which progress toward recovery was rapid. At the end of five weeks the headache had disappeared, but there was still some stiffness of the neck,

and after two months the patient was well enough to return to college.

Six weeks later he had a severe attack of diphtheria, involving the tonsils, soft palate, pharynx, and nostrils, attended by marked prostration. As neither of the above attacks could be traced to any local cause, it was thought that they indicated an unusual susceptibility to zymotic influences on the part of the patient.

CASE II. J. C., aged fourteen, school-boy, entered the City Hospital November 27, 1881. He had been taken two days before with headache, pain in the back and legs, and persistent vomiting. Tongue moist and coated. Bowels constipated. Pulse 99; temperature 101.6° F. An ice-cap was ordered. Cracked ice; milk and lime water; sponge bath. Ten grains of bromide of potassium were given every four hours. Bowels evacuated by enema. The night after entrance he became delirious, and on the next day the head was strongly retracted, with tenderness over spinous processes and hyperæsthesia of the extremities. The skin was cool, the face somewhat cyanotic, and an eruption of herpes appeared on the lips. Vomiting continued. Ptosis of right eyelids.

On the fourth day he was transferred to the care of Dr. Webber in the Department for Nervous and Renal Diseases. December 1st it was noted that attempts to straighten the head caused much pain, and that the skin was hot and dry. No *taches cérébrales*. The ice-bag was continued, with the use of ergot, morphine, and chloral.

During the second week the temperature, which had been as high as 105° F., remained at about 100° F., with a pulse of 60, strong and full. The pain diminished, but the head was still bent back and vomiting was frequent, so that small quantities only of milk and Mellin's food could be given, with stimulants. The mind was pretty clear.

In the third and fourth weeks the head was straighter, there was slight deafness, and complaint of pain in the neck and head. There was no recuperation, however; the stomach remained irritable; and the temperature was sub-normal most of the time, falling to 96.5° F. the day before death, which took place one month after entrance. There was no autopsy.

CASE III. J. H., laborer, aged twenty-four, was admitted to the hospital May 12, 1883, in wild delirium. The surface of the body was cool and bluish; head drawn back; eyelids closed; pupils contracted; tongue and lips dry, the former brown and cracked; sordes on teeth; jactitation of limbs; a few brown maculæ, apparently of recent origin, on shoulders and thighs. No rose spots; no œdema; no paralysis. The bladder extended nearly to the umbilicus and fifty-nine ounces of bloody urine were drawn by catheter, the patient becoming more tranquil afterward, and the next morning he had recovered consciousness. He then stated that for several days he had had a dull headache, and suddenly without warning fell down, remembering nothing afterward. At entrance the temperature was 102° F., pulse 100. Urine normal, with the exception of the blood. Catheterization was necessary for several days, during which he was roused with some difficulty, lying with the head thrown back and suffering pain in the neck when touched or moved. The temperature remained at 101° F., and the pulse at about 100, during the first week. An eruption of herpes appeared on the lips, and debility was great. Half an ounce of whiskey was given every hour for several days, with milk, and an ice-cap was in constant use. There was no vomiting, but constipation was marked.

In the second week after admission the pain disappeared, leaving no stiffness; the temperature was sub-normal, tongue clean; emaciation and weakness considerable. Convalescence slow, the patient remaining six weeks in hospital. In the treatment no drugs were used except morphine.

CASE IV. M. C., laborer, aged twenty-six, was admitted May 15, 1883, having suffered three days with pains in the head, neck, and extremities, constant nausea, occasional vomiting, nosebleed once or twice, insomnia, and constipation. At the time of entrance there was severe pain in the dorsal region of the spine, with constant groaning, the slightest movement causing intense suffering. Temperature 101° F.; pulse 84. A poultice was applied to the nape of the neck, ice-cap to the head, and large doses of morphine were given. The bowels were moved by calomel and enemata. The next day there was extreme spinal tenderness, retraction of the head, and herpes on the mouth and nose. For ten days the patient remained in a stupor, with temperature 103° F., pulse about 80. But the signs of pain gradually subsided, and on the eleventh day after admission he was comfortable, with a sudden fall of five degrees to the normal temperature, and a pulse of 70.

Convalescence was interrupted early in the fourth week by a recurrence of the spinal pains and stupor, which lasted two days, but after a month the patient could walk about, though there was considerable muscular stiffness.

CASE V. C. H., aged thirty-six, was brought into the hospital by the police September 25, 1883, in a semi-comatose condition. He had no friends, and no previous history could be obtained. His conjunctivæ were slightly congested; pupils equal; considerable apparent deafness; retention of urine, and mild delirium from the time of entrance until death. There was no paralysis of the extremities, no nausea or vomiting, and no muscular tremor. Fifty-one ounces of urine were withdrawn by catheter, and his bowels moved once. Temperature 102.6° F.; pulse 94.

September 26th. Last night he complained of considerable pain and was quite noisy. He took little nourishment, owing apparently to difficulty in swallowing. The urine was slightly high colored, strongly acid, of 1018 specific gravity, and contained a slight trace of albumen. Pulse very weak. Brandy was given subcutaneously.

September 27th. He gradually failed, and died this morning at 2.10, about thirty-six hours after entrance. Dr. George B. Shattuck, under whose care he was, gave me the above notes and the report of the autopsy.

Autopsy by Dr. Gannett (eighteen hours after death). Body of medium size and fairly well developed and nourished. Marked lividity of dependent portions. Rigor mortis present.

Brain. Nothing unusual about calvaria. Dura everywhere thin and translucent. Sinuses contained a moderate amount of coagulated blood; sulci of pia of convexities opaque and of a grayish-yellow color. Surface of convexities dry. Convolutions flattened. Pia at the base of brain along clivus and the under surface of cerebellum opaque and of a greenish-yellow color. On scraping with the knife, soft greenish-yellow masses could be removed. Vessels at the base and of the fissure of Sylvius showed nothing unusual. Lateral ven-

tricles distended three times their usual size, containing an opaque grayish fluid. Ependyma everywhere velvety, softened, opaque, and of a grayish tint. Velum interpositum reddened and injected. Fourth ventricle showed similar appearances. Section of the brain substance in general showed the puncta cruenta of normal size. Brain substance of normal consistency. Section of pons, medulla, and basal ganglion showed nothing of especial importance. Vessels of pia contained considerable blood.

Cord. Abundant escape of puriform fluid from submural space of the cord. Vessels of pia along surface of enlargements and along whole dorsal posterior region showed an abundant collection of greenish-yellow puriform fluid. Anterior region, same appearances of a less degree. Cord not opened; preserved.

Diaphragm. Right and left upper border of fourth rib.

Pericardium contained fifteen cubic centimetres clear fluid. Visceral surface of pericardium thickened and grayish in portions over anterior surfaces.

Heart somewhat enlarged in long diameter. Left ventricle very firmly contracted. Right ventricle and auricle distended with partly coagulated blood. Mitral valve admitted tips of three fingers; tricupsid tips of four. Valves and cavities not remarkable. Muscular substance of left ventricle increased one third in amount. Color and consistency good. Nothing remarkable about coronary arteries. Pleural surfaces of both sides free from adhesions.

Lungs partially contracted and everywhere crepitant, on section showed a rather pale red somewhat moist surface, and yielded on pressure a slight amount of pale fluid. Bronchi contained throughout a moderate amount of thick mucus. Bronchial mucous membrane showed nothing remarkable.

Spleen nearly double in size; usual color; somewhat diminished density. On section, pulp somewhat increased in amount and softer than normal.

Left kidney diminished one third in size; of a red color; density slightly increased; capsule detached with tolerable ease; external surface granular. On section, cortex somewhat diminished in size; of a grayish-red tint, and somewhat opaque. The distinction between convoluted and straight tubules not easily made out. Pyramids showed numerous gray lines parallel to course of tubules.

Right kidney slightly smaller than usual; had a few cysts size of large filberts beneath capsule with clear fluid contents. Otherwise kidney presented same appearances as described in the other. Œsophagus, stomach, intestines, and liver, not remarkable.

Diagnosis. Acute cerebro-spinal meningitis; acute ependymitis; acute hydrocephalus; chronic circumscribed pericarditis; hypertrophy of left ventricle of heart; acute hyperplasia of spleen; chronic interstitial nephritis (moderate degree) with cyst formation.

Remarks. In commenting on the above cases it may be said that all were severe, Cases I., II., and V. presenting many of the graver symptoms. All were adult males except the boy of fourteen. What the first case would have developed into in twelve or twenty-four hours if it had been left untreated it is impossible to say, but I thought at the time that the early evacuation of the stomach by apomorphia prevented exhausting vomiting, and that the anti-convulsive effect of morphine and atropine, with the use of nutritive and stimulating enemata during the period of unconsciousness, might have been the means of saving life. In epidemics, cases of the fulminating type rarely recover, the initial collapse usually becoming complete and death ensuing rapidly, sometimes in a few hours. Patients who survive the shock to the vital functions and live for a few days have a fair chance of recovery, a majority of fatal cases ending within five days.

Diagnosis. Hospital cases are seldom seen at the beginning of the attack. When they are brought in unconscious, as in Case V., an accurate history is not obtainable, and it is hardly possible during life to discriminate between the various causes of coma. The absence of paralysis, however, with normal or slightly albuminous urine, and the exclusion of hysteria, epilepsy, and poisoning, might, in times of epidemic, determine a probable diagnosis. The general appearance is not characteristic of typhoid, more so of typhus. In some epidemics of cerebro-spinal meningitis the petechial eruption, from which the synonym, spotted fever, is derived, is often seen, in others rarely. It was not present in any of the cases reported. The retracted head and hyperæsthesia of body and extremities due to the spinal meningitis are usually noticeable even in a state of partial coma. Herpes of the lips and face is of some value as a diagnostic sign. Certain cases of malignant or suppressed scarlet fever, so-called, fatal within twenty-four hours, may present much the same symptoms as those of the severest form of cerebro-spinal meningitis, and even an autopsy might not aid the diagnosis.

Symptoms. In these five cases retraction of the head with intense pain in the back of the neck, and prolonged headache with general hyperæsthesia, were the most noticeable indications of the disease, in all except the last, who entered the hospital moribund. Persistent vomiting, in Case II., seemed to be the main cause of exhaustion. In two other instances it was an early symptom. Constipation was present in every case; herpes of the lips and face in four; retention of urine in three, in one of whom it lasted a week; hæmaturia once, and a small amount of albumen twice; epistaxis in two cases; sore throat in one. The patients usually lay upon the side, as that position favors retraction of the head and relaxation of the cervical muscles.

The skin was dusky or cyanotic in most instances, the tongue dry and coated. There was in all more or less fever, the temperature rising to 105° F. in one case, but the height of the thermometer was not always proportionate to the severity of the symptoms, especially in Case I., whose axillary temperature was usually about 99° F., occasionally rising two or three degrees. In Case II. a sub-normal temperature and high pulse prevailed during the last week or more, the case ending fatally. The pulse generally ranged below 100, in two cases falling to 60.

Among the symptoms referable to the nervous system delirium, more or less prolonged, was noticed in every case, sometimes with subsultus and carphologia. Stupor, in varying degrees to complete coma, with hyperæsthesia, as before mentioned, usually coexisted. Convulsions occurred in one case. One patient had dilated and insensible pupils for a week; in another they were contracted. The conjunctivæ were congested in two cases. Deafness was observed twice; ptosis of the eyelid once. There was no other form of muscular paralysis, and this comparative immunity

among the subjects of cerebro-spinal meningitis has often been remarked.

Relapses or recurrence of symptoms, lasting a few days, happened twice in the third and fourth weeks. Muscular stiffness and debility in most instances lasted some time, and in one case there was effusion into the knee-joint, rapidly absorbed. Two cases were fatal. The death-rate in epidemics has varied from thirty-six to eighty per cent.

Pathology. The pathological appearances are well illustrated by the autopsy in Case V. The inflammation of the arachnoid and pia mater generally assumes a purulent form. In cases immediately fatal from shock and collapse, the anatomical evidence may be slight or wanting, although the brain is usually anæmic and œdematous. The ventricles are often found at a later stage distended with serum.

Treatment. In treating a self-limited disease of short duration with such a violent onset that the vital functions are often disabled at the start it is all-important to try to bridge over the few most critical days by artificial means. At the outset, if the stomach and bowels are full, it is well to empty them, and no emetic agent is so good as apomorphia, which may be used hypodermically in doses of one sixth to one tenth grain in adults, and one twentieth to one thirtieth in children. The sedative and relaxing effect of apomorphia is also very valuable in cases of convulsion, like Case I. A comatose condition or vomiting of cerebral origin would indicate the propriety of rectal alimentation. In many cases early blood-letting is advisable, and the utility of cold applications to the head and spine is generally conceded, although I could see no direct benefit from them in the cases reported, on the contrary, they were often uncomfortable.

Beyond this, symptomatic treatment is necessary, and chief among drugs is opium, supplemented, perhaps, by atropine and bromide of potassium during the acute stage of the disease; there is little fear of narcotism. Diuretic and diaphoretic measures are useful, especially the hot-air bath. Quinine and ergot, with iodide of potassium and mercury as absorbents of the effused product at a later stage, have been recommended, but in no disease is the "post ergo propter" mode of inference as applied to the effect of drugs more likely to be fallacious.

Causation unknown. Under the same sanitary conditions cerebro-spinal meningitis prevailed extensively in Boston in 1873, when there were 216 deaths as compared with sixty the year before, and thirty-five the year after, the violence of the influence appearing to exhaust itself in a single year. In 1872–1873 it went hand in hand with an extensive outbreak of scarlet fever, following closely or accompanying the end of the severest epidemic of small-pox that Boston has experienced since the introduction of vaccination, items which I quote from the late Dr. T. B. Curtis's valuable report on the Sanitary Condition of Boston, published in 1875. Of course those localities suffered most from these diseases where the worst sanitary conditions prevailed, and the victims were least able to withstand their ravages, but the surroundings play a less important part in the causation of cerebro-spinal meningitis than of other epidemic diseases. Winter and spring have been the seasons, and crowded barracks the favorite places for its attacks, excessive fatigue, insufficient food, and exposure to cold acting as predisposing causes. A few doubtful cases only of contagion have been reported. Robust males between fifteen and thirty-five are the usual subjects, although in children, among whom the disease has at times extensively prevailed, the disproportion between the sexes of the patients is not great. The occurrence of cerebro-spinal meningitis in animals has often been observed, especially among horses in New York for some months before the epidemic in 1872, which preceded the outbreak in this vicinity by about a year.

History. Although there is not time to enter at length upon the history of cerebro-spinal meningitis in New England the narrative is interesting, and brief mention may be made of the earliest epidemic in Massachusetts, in 1806, when nine cases occurred in the town of Medfield, all fatal; of the report on Spotted or Petechial Fever, in 1810, by Drs. Thomas Walsh, James Jackson, and John C. Warren, a committee of the Massachusetts Medical Society; of the report to this Society, by Dr. Joseph Sargent, of a limited epidemic in Worcester County in 1849; and again, in 1866, that of a committee of the Massachusetts Medical Society, who found that 280 cases had been recorded in the State during the previous nine years, with a mortality of sixty-one per cent.

Much of the earlier literature on this subject is French, and admirably presented since the beginning of this century. Great Britain, with the exception of Ireland, where one epidemic among the constabulary caused a mortality of eighty per cent., has been comparatively free from the disease, and in Germany it attracted little notice until about twenty years ago. In this country, however, no disease has been more carefully watched and recorded, and among the numerous publications of later years the Boylston Prize Essay for 1866, by Dr. Samuel G. Webber, is especially complete and suggestive. Dr. Webber called attention to the pneumonic form of the disease, in which the lungs bear the brunt of the attack, the cerebro-spinal symptoms being delayed or imperfectly developed. Such a class of cases, in which croupous pneumonia was complicated by cerebro-spinal meningitis, especially in children, was afterward described by Immermann, Heller, and other German writers. Dr. J. Lewis Smith, of New York, in commenting upon this type of disease, states that in the epidemic season of 1872 in that city an unusually large number of cases of pleuro-pneumonia of an asthenic kind occurred among old people, suggestive of a common atmospheric cause.

The monographs of Professor Stillé and of Dr. Meredith Clymer portrayed the disease as it appeared in Philadelphia and New York, and the Sanitary Memoirs of the War contain a valuable article by Dr. S. B. Hunt. The State Board of Health of Michigan published an excellent report by Dr. Henry B. Baker in 1874, and in the same year Dr. J. Baxter Upham, who had previously described the Epidemics in the Camps about Newbern, N. C., in 1863, wrote a very complete and interesting history of the epidemic of 1873 for the State Board of Health of Massachusetts, in which it appears that 517 cases were returned by 199 physicians, and that there were 216 deaths in Boston alone. Dr. Upham informs us that it was not until 1867 that "cerebro-spinal meningitis" appeared as such in the nomenclature of the city records, and not until 1872 in those of the State, cases of this disease having previously been classed with others under the head of "cephalitis."

During the decade 1873–1883 2053 deaths have oc-

curred from cerebro-spinal meningitis in Massachusetts, 747 of them in 1873 alone, leaving an average of 130 fatal cases for each of the other nine years. Suffolk County has returned 476 deaths, Middlesex 412, and Worcester 240, but there has been a steady though small rate of mortality from this cause in most of the cities and many country towns in all sections of the State except Cape Cod and the islands, where it has been trivial. For the last two or three years the number of deaths has increased moderately, namely, to 157 in 1881, and 166 in 1882, the distribution in 1881 being chiefly as follows: Middlesex County, 27; Suffolk, 24; Hampden, 21; Essex, 19; Worcester, 14.

The valuable Mortality Tables of the State Board of Health, published weekly in the JOURNAL, show that neither of the diseases mentioned above, smallpox, scarlet fever, and cerebro-spinal meningitis, has prevailed during these years to an alarming extent, the epidemic type having been mild, but the seed has still lingered in our midst, and is wide-spread, cases of cerebro-spinal meningitis cropping up from time to time among the susceptible in such a way as to suggest the probability of a future outbreak whenever the mysterious combination of influences occurs on which such visitations depend.

A CASE OF SUDDEN AMAUROSIS. RECOVERY.[1]

BY HASKET DERBY, M. D.

THE following case is both so unusual, as to occurrence, and so unexpected, as to result, that I have thought a brief report of even the scanty details I have at my command might not be without interest.

October 13, 1883, I saw Mary T., aged fifteen, for the first time. Near sighted since early childhood, she had grown steadily more so during her school life, and was using spectacles, right −9.5 D, left −8 D, all the time and for all purposes. A close, ambitious student, and attending a public school, she had worked unremittingly for the past year, making her studies her principal object in life, and paying little or no attention to her general health. This, however, had ordinarily been very good, with the exception of catamenial irregularity. The flow commenced at the age of thirteen, and had never been present oftener than once in two months. She was large for her age, and apparently neither nervous nor imaginative. Since the spring of this year she had, for the first time, been subject to severe headaches, not attended by nausea, extending over the whole head, lasting both day and night, materially worse during this fall. She came to me on account of failure of sight, which had been coming on for two weeks. Observing that her eyes were watering and her vision blurry, she had covered her left eye, and ascertained, to her astonishment, that she could not see with the right. Since making this discovery, a fortnight ago, the left eye had rapidly lost ground, and she was now unable to continue her studies.

The eyes were prominent and the pupils large, but presented no abnormal appearance to external inspection. Ophthalmoscopically there was a large, but defined and apparently non-progressive sclerotico-choroiditis posterior surrounding each optic entrance. The remaining fundus of each eye was entirely normal; no isolated patches of atrophy, no change in the circulation, no whiteness of the nerves. With 13 D concave the left eye had vision one tenth, the visual field being not contracted. *The right eye had no perception of light whatever*, either when tried by the mirror of the ophthalmoscope, by a lighted candle in a dark room, or exposed to the full glare of sunlight. The pupil of this eye was most active, contracting and expanding under light and shade, the other eye of course being closed.

What was the diagnosis? The first suspicion was naturally of malingering. The perfect honesty and simplicity of the patient went far towards removing this, and the usual tests with prisms showed the entire correctness of her statement. There were no other symptoms to encourage the diagnosis of hysterical amaurosis, no signs of general hysteria, of nervous derangement, of affections of other organs of special sense, or of local hyperæsthesia. All ophthalmoscopic indications were wanting. The ready response of the pupil to light and shade showed the deep-seated character of the affection, and that, according to Flourens, it must be located beyond the corpora quadrigemina; hence that it was likely to be diffused through a considerable portion of the brain. Such affections, says Leber, may occupy a region the integrity of which is essential to the maintenance of life itself. When the blindness is complete the general prognosis, according to him, is always grave. Should, in a short time, however, no affection of the general health occur, the chance of an ultimate restoration of sight is encouraging, the probability then being that there is no gross material lesion, but a local derangement that may readily disappear.

Four days later the condition of the patient was wholly unchanged. Entirely at a loss as to diagnosis, but in the hope that a possible derangement of the cerebral circulation might be connected both with the headache and the loss of sight, and if so, be affected by a local abstraction of blood, I applied the artificial leech to the right temple, removing an ounce and a half of blood. Lactate of zinc was also ordered in moderate doses.

The next day showed a result as remarkable as it was unexpected. The headache, which had been continuous and severe for six months, disappeared after the cupping, and has never since returned. Five days later there was distinct perception of light in the right eye, and even ability to follow the motions of the hand, held close to the eye. The cupping was now repeated, and again applied a week later. During this time each eye steadily gained. October 30th the right eye, armed with −12 D, had vision four tenths. The left, with −13 D, had two tenths. Each visual field could now be taken, and was found to be normal. November 6th there was

o. d. V 0.5 nearly.
o. s. V 0.4.

and this amount of vision continued when I last saw the patient, December 8th. In her own opinion her sight had fully returned. Her health was perfectly good, and she was wholly free from headache. Except for the high degree of myopia, and consequent imperfect vision, each eye seemed normal. She returned to school early in the present year.

None of the ordinary causes of cerebral amblyopia seem to have been active here. The termination of

[1] Read before the Ophthalmological Section of the Suffolk District Medical Society, January 29, 1884.

the case, of course, forbids the supposition of organic change at the base of the brain, of apoplexy, of a tumor, or of meningitis. There had been no suppression of urine. There was no suspicion of spinal disease. There had been, beyond the headache, no antecedent sickness. Finally, there was no ophthalmoscopic change, save the choroidal atrophy.

That the headache was in some way or other connected with the blindness seems probable, and that the sudden disappearance of the headache is due to the application of the Heurteloup cannot reasonably be doubted. This much-neglected instrument never entered into the armamentarium of the Vienna school of ophthalmology, much as its use was insisted on in Berlin. It is, I imagine, seldom if ever used by the majority of those here present. Of course it has no advantage over the old cupping apparatus, save in the greater facility of application to a region like the temple, particularly in the case of females. I think its disuse among ophthalmologists is seriously to be regretted. It was much employed and warmly advocated by Graefe, especially in cases of congestive amblyopia and chronic affections of the choroid; in fact, in all cases where a rapid evacuation of an appreciable amount of blood was indicated, but not, of course, in those forms of external ophthalmia where the prolonged and slow flowing of a steady stream is productive of decided benefit.

Local cupping has in our day seemed to share the fate of general venesection, a therapeutical method of value when judiciously used, greatly abused by routine practitioners, but whose total neglect is a distinct loss to medicine.

AN IMPROVED APPLIANCE IN THE PHYSIOLOGICAL TREATMENT OF CLEFT PALATE.[1]

BY HENRY A. BAKER, D. D. S.,
Lecturer on Oral Deformities, Boston Dental College.

It has usually been said that lesions of the palate arise from one of two causes, that is, they are either congenital or accidental.

Congenital cleft of the palate was as commonly treated surgically as by mechanism. The former treatment has been nearly or quite abandoned in recent years for two very good reasons: First, it is a very painful one for the patient, and difficult for the operator, and a failure of closure is largely in the majority. Second, it universally fails to improve the speech even after a successful closure.

Notwithstanding the above facts some physicians recommend staphyloraphy. They must certainly do so from want of knowledge of the anatomy and physiology of the vocal organs and their use in the mechanism of speech, which is the production of sound, and its direction through the nasal passage or the mouth at will, being controlled by certain organs whose modification and resonance enable us to form what we term articulate speech.

One of the most important aids in producing the above results is the soft palate. This organ is lifted up and comes in close contact with the pharyngeal wall, thus shutting off the nasal passage, which is absolutely essential in producing all excepting nasal sounds. After the operation of staphyloraphy such a closure is impossible, owing to the soft palate having been made too short and tense, hence defective speech invariably follows.

Accidental lesions of the palate, as the name suggests, are caused either by accident or disease. These cases may be successfully treated with a very simple appliance, while the same amount of skill exercised on a congenital cleft would have no beneficial result. This may be accounted for by the fact that in the former case the patient had learned to articulate distinctly, and use the organs of speech efficiently and correctly, while persons who are thus deformed from birth are obliged to learn the art and methods of articulation by slow and painful processes. The organs require the training which is necessary for one who acquires a new language. Hence the appliance for relief should not only fill up the gap in the defective palate, but should also be so constructed as to work on physiological principles in harmony with the natural movements; that is to say, it should be under perfect control of the surrounding muscles. It is manifest, therefore, that the success even of the most scientifically adjusted instrument depends largely upon the coöperation of the patient who uses it.

As the above malformations are classed as congenital, and accidental, the appliances for their relief are classed as follows: obturators and artificial vela. Among the former Dr. William Suersen is the inventor of one which has created much interest. The most important and significant advance in this department of science, however, made itself manifest in attempts to form an artificial velum, and Dr. Stearns was probably the first to introduce its true principle. I speak of these two investigators, Suersen and Stearns, because I am led to think that they have brought before the profession the most scientific apparatus of each class, and it is from a consideration of both of their appliances that I have evolved the principle, in explanation of which this paper has been prepared.

Suersen says: "In order to be able to pronounce all letters distinctly it is accordingly necessary to separate the cavity of the mouth from the cavity of the nose by means of muscular motion. That separation is, under normal conditions, effected, on the one hand, by the velum palati, which strains itself (consequently by the levator and tensor palati), but, on the other hand, also by a muscle, which to my knowledge has not yet received a sufficient amount of attention in connection with these operations. I mean the constrictor pharyngeus superior. This muscle contracts itself during the utterance of every letter pronounced without a nasal sound just as the levator palati does. The constrictor muscle contracts the cavum pharyngo-palatum, the pharyngeal wall bulging out, and it is chiefly on the action of this muscle that I base the system of my artificial palates."

It will be noticed that Suersen admits that the levator palati is an important organ of speech, yet he makes no provision for utilizing it as such, and only provides for the superior constrictor muscle coming in contact with the distal surface of his appliance to shut off the nasal passage. In my opinion, for the patient afflicted with congenital cleft to acquire perfect articulation with such an appliance (even if it be possible) years of application and training of this muscle would be necessary. A little reflection will show that this muscle, besides performing its own function, must be trained to fulfill those of the velum palati, levator palati, and

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, December 12, 1883.

tensor palati. But in an *accidental* lesion this may be all that is necessary, as the patient having previously learned to articulate distinctly, and having this deformity come upon him afterwards, the superior constrictor muscle would, no doubt, be sufficiently developed to perform that function.

Sir William Fergusson, in his report of a dissection made by him of a cleft palate in 1844, states distinctly that the superior constrictor was very full, and he also claimed for that muscle very decided forward action in deglutition. It was in the year 1841 and 1842 that Dr. Stearns made his first artificial velum. In 1860 Dr. N. W. Kingsley came into the field, and took up Dr. Stearns's appliance. Finding it too complicated for the general practitioner to construct, and too expensive when completed for those in ordinary circumstances, he was led to serious thought in regard to modifying its production, but he still adhered to the same principle of utilizing the levator muscle.

Dr. Kingsley says respecting Dr. Stearns's appliance: "Two principles were vital to Dr. Stearns's instrument, namely, first, the artificial velum should embrace the levator muscles of the palate, so that it could be lifted by them; and, second, that it should bridge the upper pharynx behind the uvula, and cut off nasal communication at will."

Dr. Kingsley's modification of Stearns's instrument consisted chiefly in leaving off the triple form, and doing away with the central slit, the flap, and the springs. The simplified form consisted of two leaves of soft vulcanized rubber, connected in the median line, the palatal portion running down to the uvula, and then bridging across at that point, and the nasal portion reaching across the pharynx. Instead of the appliance being made in sections so as to slide across each other, as in the Stearns, the bifurcated uvula slides between the two leaves, and the levator muscles of the palate lift it up to meet the pharynx, thus shutting off the nasal passage. It will be noticed that in this simplified form the Stearns principles are fully carried out, and to Dr. Kingsley that credit is due. His claims to originality are in the simplifying of the Stearns instrument.

Dr. Kingsley says: "An important principle enunciated by Dr. Stearns as essential to the success of all artificial vela for congenital cleft was that the instrument filling the fissure in the natural palate must be of the nature of a valve under the control of the muscles surrounding it, and so arranged that it could be elevated by them, thus shutting off the nasal passage, as is absolutely essential in the production of certain sounds belonging to articulate language. This principle was carried out by him first in the character of the material chosen, being of a yielding, elastic nature, and second in the form, being made to embrace the levator muscles, and subject to their control."

Dr. Kingsley in speaking of Suersen's appliance says: "First, that of all obturators this is the best form for a congenital fissure, but while the wearer is enabled to articulate with such an instrument it is only after he has learned articulation with another apparatus. Second, that a soft, elastic, artificial velum is much better adapted to the acquirement of articulation than any unyielding, non-elastic substance, but when acquired an obturator may be substituted. Third, that in very rare cases articulation may be acquired with an obturator only, but it is the result of the extra activity of the pharyngeal muscles, while with the elastic velum the levators of the palate contribute largely."

A great many practitioners in treating a fissured palate simply separate the nasal and buccal cavities by a thin plate, thinking that the separation is all that is required. Some even make a great parade of this device, claiming it to be an improvement over any other appliance. A little reflection will show this to be impossible, as I shall endeavor to explain before closing this paper.

My own experience with soft vulcanized rubber for an artificial velum is that if it would resist the fluids of the mouth, and not go through a process of decay, and change its form, in short, if it could be made permanent, it would be all that could be desired. Since this is impossible I do not hesitate to say that it is a very objectionable material, and I have been led to long and careful meditation regarding it.

I experimented for five years to provide an artificial appliance with hard rubber, carrying out the Stearns principle, whereby I could utilize the levator muscles to control the movement of the appliance, and with which articulation could be learned as well as with the soft rubber. My studies and experience induced me to settle upon the following device, which consists of a

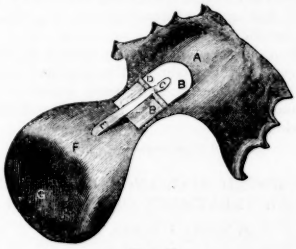


FIG. 1.[1]

gold or hard-rubber plate (A. Fig. 1), covering the roof of the mouth down to the junction of the hard and soft palates. From this point the artificial velum, F, extends back and downward, restoring the symmetry of the palatal surface by bridging across and lying upon the muscles of each side. The distal surface, G, or that portion coming in contact with the pharyngeal wall, is quite broad, and so constructed as to articulate perfectly with this surface, while the constrictor muscle contracts and closes around it on a semicircle. This is the Suersen principle, and the main ideas I take from that appliance.

The velum is of polished hard rubber, gold, or platinum, and much resembles a chestnut in form.

It is attached to the plate with a hinge joint, B, B, thus giving free movement at the junction of the hard and soft palate. At the junction of the hard and soft palate there is a stop, which prevents any downward pressure upon the muscles when in a relaxed condition.

The bulb-like form of the velum (see D, Fig. 4) necessitated a thickness which would naturally have made it quite heavy, and, as the resultant weight would be a serious objection, I was desirous of overcoming the difficulty. A suggestion happily came to

[1] The accompanying cuts are kindly loaned by Dr. J. W. White, the editor of the Dental Cosmos.

my relief in this way: While in a drug store I accidentally took up a hard rubber truss made by a Philadelphia firm. Discovering that the pad was made

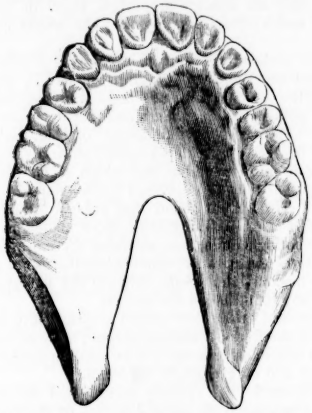


Fig. 2. The cleft, extending a little beyond the soft into the hard palate.

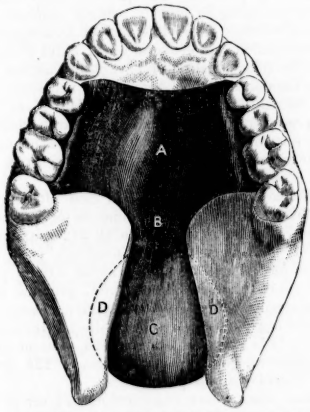


Fig. 3. Appliance in position: A, the plate; B, the stop, preventing any downward pressure when the muscles are in a relaxed condition; C, the artificial velum; D, D, muscle lying under it, the dotted lines showing the appliance resting on the muscles.

hollow, I thereupon wrote to the manufacturers, asking them if they would inform me how they prepared the rubber in that way. In their reply I found that the method was quite simple. It is as follows: Take the vulcanite rubber in the soft state and cut the sheets so that when joined together the desired form is given. Then a little water is dropped into the cavity (I found it better to add a little alcohol), the edges are sealed, and the piece vulcanized in the usual way. The steam produced by the water and alcohol inside creates sufficient pressure to keep the walls distended. By this method the appliance that the cuts were taken from which illustrate this article was made so light that it would not sink when put in water.

In treating a case by Kingsley's method I was obliged to use a hinge-joint to bridge over a union by staphyloraphy. I found in that case that the appliance was much better controlled by the surrounding muscles, and saw a much more rapid progress in acquiring articulate speech. This led me to more fully provide for that muscular movement, and I will endeavor to give the reasons why this should be done. As we have before quoted from Suersen, in order to pronounce all letters distinctly it is necessary to separate the cavity of the mouth from that of the nose by muscular action, and to close the nasal passage in pronouncing every letter, except *m* and *n*. This can be demonstrated by holding the nose while endeavoring to pronounce all the letters as plainly as possible.

In studying the mechanism of speech we learn that more than three fourths of the sounds of articulate language depend upon the integrity of the soft palate for their perfect enunciation. This being the fact, articulation with a rigid obturator must be extremely difficult to acquire. If three fourths of the sounds depend upon the free movement of the natural palate, it seems to me a sufficient reason why we should provide for that movement in an artificial one.

Dr. Kingsley says that with a yielding appliance the levators of the palate contribute largely to correct speech. The surrounding muscles have control over my appliance in the following way: The artificial velum bridges across the opening and lies upon the muscles of either side. (See Fig. 3, D, D.) With all sounds requiring the closure of the nasal passage it is thrown up (D, Fig. 4) by the levator muscles, there being no resistance. The thickness of the velum brings its posterior surface in close apposition with the superior constrictor muscle, F, and thereby affords, in the pronunciation of the gutturals, a firmer resistance to the pressure of the tongue, G, than can be obtained with a thin obturator. By the presence of the hinge, B, the above movements are rendered so free and easy

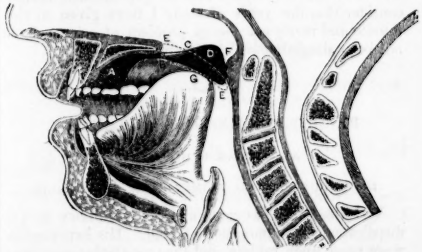


Fig. 4. The artificial palate thrown up by the muscles, E, E, as in all sounds requiring the closure of the nasal passage; F, the superior constrictor muscle advanced to meet it; G, the tongue, raised, pressing hard against the appliance, as in pronouncing the letter *k* or *g*; A, the plate; B, the hinge joint and stop.

that there is no tendency to any displacement of the plate, such as occurs with a rigid appliance. If a nasal sound immediately follows a guttural, the descent of the velum is rendered certain by its own weight. (Fig. 5, D.) My first instruments show a spring bridging over the hinge, by which I intended to accellerate the movements of the velum. This I found later to be unnecessary.

To accomplish the above with a material that would be permanent was a problem very difficult of solution. Of course it is impossible to give to a piece of mechanism muscular power, but it should be made so easily

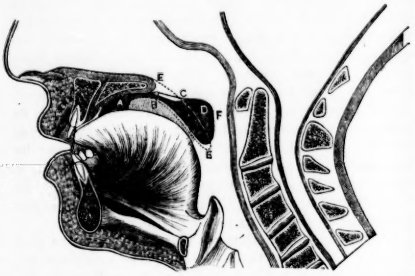


FIG. 5. The muscles relaxed, the appliance descended, thus giving a free passage for nasal sounds and respiration.

movable as to be acted upon by, and be under perfect control of, the muscles surrounding it.

I claim the following advantages for my appliance: —

First. That it is made of a permanent material.

Second. That articulation can be learned with it more readily than with any other appliance.

Third. That it is much easier to make.

Thus the unsatisfactory operation of the surgeon has been replaced by artificial organs of precision, working upon physiological principles. The ingenious appliances of our distinguished colleagues, Suersen, Stearns, and Kingsley, whose scientific attainments and researches have reflected such lustre upon the art of dental prosthesis, have excited my admiration as I have studied their complex operations; and if I have been enabled to extend their usefulness, and increase their value by substituting an imperishable material for the less excellent substances now in general use, I shall consider that the years of study I have given to this remote and rarely-considered problem of science have not been altogether without their reward.

REPORT ON MEDICAL CHEMISTRY.

BY WILLIAM B. HILLS, M. D.

DISTRIBUTION AND ELIMINATION OF POISONS.

V. LEHMANN [1] has continued his researches on the distribution and elimination of lead. His experiments were made upon rabbits, and the preparation employed was plumbic nitrate, which was administered by subcutaneous injection in quantities varying from 0.016 to 0.500 gramme. The separation and quantitative determination of the lead were effected by electrolysis and the colorimetric method, using sulphuretted hydrogen in an alkaline solution. The results show that the liver, which in most cases of metallic poisoning holds the first place in order of examination, contains relatively to the weight very little lead. The bile, on the other hand, and the bones likewise, contain a large proportion. As much lead was found to be excreted in the fæces as in the urine; the lead thus excreted must have been eliminated in the bile, and not reabsorbed by the intestines, a circumstance which serves to explain the smaller proportion found in the liver, from which elimination by the bile would naturally occur.

The author investigated the changes which are brought about in the elimination of lead in the urine under the action of various therapeutic agents, especially potassic iodide. He found that the action of this salt is to promote the elimination of lead, exciting it, when this has ceased to take place naturally, by bringing again into circulation that which, so far as his investigations tend to show, had become deposited in the bones. He further found that potassic bromide, and probably also potassic chloride, have analogous effects in promoting elimination, and may therefore serve as substitutes for potassic iodide when the use of the latter is inadmissible. Sodic chloride did not appear to exert any influence on the process.

Guareschi [2] finds that arsenic is principally accumulated in the liver; a notable amount, however, is found in the lungs and kidneys, a very small quantity in the muscles and only traces in the brain.

C. Bischoff [3] has recently investigated the distribution of poisons in the various organs of the body, and has tried many of the methods recommended for the estimation of poisons. The present paper deals with cases of poisoning by phenol, potassic chlorate, oxalic acid, and potassic binoxalate, and by hydrocyanic acid, potassic cyanide, and essential oil of bitter almonds.

For the determination of phenol, the author recommends Landolt's method, but finds it necessary to continue the distillation until the distillate gives no further precipitate of tribromophenol on addition of bromine water. To isolate 0.5 gramme phenol from one kilogramme of substance about two litres of distillate is required.

In the case of a man who had died fifteen minutes after taking fifteen cubic centimetres of a ninety-one per cent. solution of carbolic acid, 242 grammes contents of stomach and small intestines gave 0.1711 gramme phenol; 112 grammes blood, 0.0259 gramme phenol; 1480 grammes liver, 0.637 gramme phenol; 322 grammes kidney, 0.201 gramme phenol; 508 grammes heart muscle, free from blood, 0.1866 gramme phenol; 1445 grammes brain, 0.314 gramme phenol; 420 grammes gluteal muscle, traces; 125 grammes urine, 0.0014 gramme phenol.

In two cases where putrefaction had set in before the post mortem either traces of phenol or none at all could be found in the organs.

Potassic chlorate is best estimated by dividing the dialysate from the organs into two parts, estimating the chlorine of the chlorides directly with silver solution in one, reducing the other with sulphurous acid, adding not too dilute nitric acid, and estimating the total chlorine as silver chloride. From the difference the chlorate can be calculated. Potassic chlorate is very soon reduced by moist organic substances, and especially by blood, so that chemical evidence may not be obtainable in undoubted cases of poisoning with potassic chlorate. Four cases were investigated in which death had followed the use of considerable quan-

[1] Journal of the Chemical Society, London, 1883, page 1163, from Zeitschrift für Physiologische Chemie, vi., p. 528.

[2] The London Medical Record, October 15, 1883, page 436.

[3] Journal of the Chemical Society, London, 1883, page 1020, from Berichte der Deutschen Chemischen Gesellschaft, 1883, page 1337.

tities of potassic chlorate for gargling, etc. In two cases not a trace could be detected; in one case traces were found; and in a fourth slight traces of chlorate could be isolated from the stomach and intestines, and their contents, but none from the liver, kidneys, or pancreas.

In cases of poisoning with oxalic acid or oxalates, quantitative estimation is essential on account of the wide diffusion of oxalic acid in the vegetable kingdom, and its consequent ingestion in food or medicine. Salt of sorrel consists more frequently of potassic tetroxalate than of dioxalate, and the tetroxalate on treatment with absolute alcohol is completely decomposed into free oxalic acid and insoluble dioxalate. On finding oxalic acid in an alcoholic extract, therefore, further experiments are needed to ascertain if the poison was oxalic acid or salt of sorrel. The organs are best extracted with alcohol, without addition of acid, to dissolve free oxalic acid and the "half bound" acid of tetroxalates, then digested with water to dissolve any alkaline oxalate, and finally with dilute hydrochloric acid to dissolve any calcic oxalate, the oxalic acid being estimated in each extract. The quantitative results in five cases of poisoning are given.

The best method for the quantitative estimation of hydrocyanic acid is to mix with excess of alcohol, acidulate with tartaric acid, and distill, a constant stream of air or carbonic anhydride being passed through the apparatus, and the distillate received into a concentrated solution of silver nitrate. The results obtained in five cases are tabulated. The contents of the stomach and intestines contained the largest amount; next in order was the blood. No hydrocyanic acid was found in the urine, and very minute quantities only or none could be found in the muscles.

ARSENIC.

Dr. D. W. Finlay [1] reports a case of poisoning in which death took place in one hour after swallowing a solution containing upwards of twenty-six grains arsenious oxide (white arsenic). This is, we believe, the shortest fatal period on record with one exception. Symptoms referable to the stomach were slight, but collapse was profound.

ON CHANGES IN THE CORD AFTER POISONING WITH ARSENIC, LEAD, AND MERCURY.

Dr. N. Popow [2] has studied the above subject experimentally. The results of his investigation are tabulated as follows: —

(1.) Arsenic, lead, and mercury produce marked changes in the cord in acute cases of poisoning, which must be regarded of the character of an acute central myelitis.

(2.) In relatively protracted cases these changes are not confined to the gray substance, but invade the white, and thus represent the form of a diffuse myelitis.

(3.) The peripheral nervous system remains entirely unchanged by the rapid action of these poisons.

(4.) The clinical symptoms on the part of the nervous system are fully explained by the changes described above, while no one of them can be explained by an affection of the peripheral nerves.

Popow's experiments were made chiefly upon dogs, and the doses were in most cases regulated, so as to contrast the results in both acute and chronic poisoning.

[1] The Lancet, December 1, 1883, page 943.
[2] Virchow's Archiv, vol. xciii., p. 351.

MODIFICATIONS OF GMELIN'S TEST FOR THE BILIARY PIGMENTS.[3]

Krehbiel adds to four parts of the urine to be tested one part hydrochloric acid, then drop by drop a saturated aqueous solution of chloride of lime. After the addition of three to six drops the characteristic green color appears, and is followed upon further addition of chloride of lime by the well-known play of colors.

Capranica recommends the following reaction as especially sensitive. The coloring matter is first extracted by shaking with ether or chloroform. To the solution thus obtained a five per cent. solution of bromine in alcohol is cautiously added until the green color appears. The coloring matter can now be completely removed from the ether or chloroform by shaking with hydrochloric acid. The green color is perceptible if the original solution contains no more than one part of coloring matter in two hundred thousand.

EXAMINATION OF URINARY SEDIMENTS.

Certain urines, especially concentrated urines and those passed in febrile conditions, deposit upon standing a considerable sediment composed chiefly of alkaline urates, and often deeply colored by uroerythrine. The detection of the organized sediments, such as blood globules, epithelium, casts, etc., in such cases is difficult and often impossible. To facilitate the examination in such cases Méhu [4] adds to such sediments, after they have subsided and after most of the urine has been removed, a small quantity of a saturated aqueous solution of ordinary sodic phosphate. This dissolves completely the pigments and urates so that the subsequent examination of the sediment is comparatively easy. An excess of the sodic phosphate does no harm, but its addition frequently causes a precipitation of crystalline calcic phosphate. Méhu prefers this method of treatment to the common one in which the urates are dissolved with water. The latter delays the subsidence of the organized elements, and besides tends to soften and break them up.

[3] Zeitschrift für Analytische Chemie, 1883, page 626.
[4] Journal de Pharmacie et de Chimie, 1883, page 228.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

January 28, 1884. Dr. Charles D. Homans presided.

COLLOID CANCER OF THE APPENDIX VERMIFORMIS.

Dr. F. W. Draper presented a specimen of colloid disease of the appendix cæci, and related the history of the case as follows: —

The patient was a man, sixty-five years old, a cooper by occupation. He used liquor moderately. He was always healthy until three months ago, when he had diarrhœa with alternations of constipation. Three weeks before his death vomiting first supervened, initiated by griping pain above the umbilicus. Everything ingested was almost immediately returned unchanged. There was no pain about the lower parts of the abdomen or about either iliac fossa.

The patient entered the City Hospital January 14th, and died January 18th. During this interval some

temporary relief was obtained for the obstinate vomiting by the use of morphia, dilute hydrocyanic acid, and champagne. The matter vomited consisted of mucus mingled with undigested milk-curds. There was moderate pain or "soreness" along the course of the transverse colon, but no tenderness in any part of the belly. The dejections were loose, dark-colored, or greenish, but the diarrhœa was less troublesome than the vomiting. Emaciation and weakness were marked. The temperature was 99.2° F.; the pulse varied but little from 100. Careful physical examination failed to detect any tumor or other local alteration to aid in establishing a diagnosis. The urine was normal in its chemical and microscopical characters. Obstinate hiccough occurred on the day before death, and aided the vomiting and diarrhœa in determining fatal exhaustion.

The autopsy found the specimen exhibited to the Society to be the only morbid part having relation to the cause of the death. The ileum immediately above the ileo-cæcal valve and for some distance along its course was dilated and distended with liquid fæcal matter. Just at the valve, upon its upper side, three foreign bodies — two small fragments of bone and a prune stone — were found lying loosely before the orifice into the cæcum. The valve itself was constricted so as to admit with difficulty the tip of the forefinger. The mucous membrane of the cæcum and lower part of the ascending colon was thickened and deeply reddened, but not ulcerated. The upper third or head of the appendix was enlarged and dilated to such a degree that externally it was of the size and shape of a large plum; its cavity, deeply injected, was irregular in its surface, and would admit the little finger. The opening to the intestine from the appendix was also dilated. The thickened wall of this enlargement presented the characteristic appearances of colloid disease. The free end of the appendix beyond the dilated portion was very slightly enlarged, and contained inspissated fæcal matter in its canal. The peritonæum and sub-peritoneal tissues adjacent to the new growth were normal in appearance.

DR. W. W. GANNETT, in answer to a question, quoted Recklinghausen, that during his fifteen years' service at Wurzburg gall-stones and cancer of the gall-bladder were both rare. In his later service at Strasburg he found them both much more common. He did not advance this as absolute proof of the effect of mechanical irritation in producing malignant disease.

MALFORMATION OF THE VAGINA SIMULATING EXTROPHY OF THE BLADDER. LOBAR PNEUMONIA IN A YOUNG CHILD.

DR. T. M. ROTCH showed the specimen, and said that it had been seen by many physicians during life at the West End Dispensary, and had been taken by all of them for extrophy of the bladder. There was a large abdominal hernia, and below it a mucous surface that had been taken for the posterior wall of the bladder. On this surface were two culs-de-sac, which from their position had been taken for ureters. Still below and in the median line was a large orifice resembling the meatus of the urethra. A dissection by Dr. Whitney showed this to be the vagina, a probe passed outward from the uterus coming through it. The supposed ureters were culs-de-sac. Below them were two hitherto undiscovered orifices, the right of which was a blind opening, the left being the real urethra, as water flowed out through it when injected through either of the real ureters. By following down the ureters a normal bladder was found, through which the water passed. The exposed mucous surface was, therefore, a malformation of the vagina. The case was also interesting as dying from lobar pneumonia after an illness of twenty-four hours, beginning in the third day of life; young children having commonly lobular, catarrhal rather than lobar, fibrinous pneumonia. The left scapula was drawn up to the neck and attached to the upper rib.

CHRONIC NASAL CATARRH; REMOVAL OF HYPERTROPHIED TISSUE.

DR. F. I. KNIGHT showed two specimens removed by an operation which he has reason to think is not generally known except to specialists, and which gives much relief in some cases. The adenoid tissue of the vault of the pharynx and its posterior wall, resembling the tonsil, and sometimes called a "third tonsil," is capable of being much hypertrophied, and *may* block the nares, thus hurting the voice, and keeping up catarrh by compelling the patient to breathe through the mouth. This has been removed by twisting it off with forceps, which, if the tissue is hard, may do injury; or by burning it with galvano-forceps, which last is very dangerous if done carelessly, because it may set up inflammation in the middle ear. The speaker did not mean that the galvano-cautery has no place. It may be used with care in cauterizing a stump. The specimen presented had been removed by a snare. The other specimen was of the mucous membrane and submucous tissue (erectile tissue of Bigelow) covering the turbinated bones. This when hypertrophied does the same mischief as the large "third tonsil." Touching it with nitric acid is of no use. A weak snare may snap, but No. 5 piano wire, proposed by Jarvis, of New York, cuts through anything. It is placed through the nostril with the aid of the rhinoscope, and at least two hours must be used in cutting through or there may be serious hæmorrhage. The patient holds the instrument, and has pain only when the screw is tightening. He should be warned not to blow his nose for some hours.

DR. A. L. MASON read a paper on

CEREBRO-SPINAL MENINGITIS. FIVE CASES. — ONE OF THE FULMINANT TYPE, TREATED WITH APOMORPHIA, MORPHIA, AND ATROPIA. RECOVERY. — ONE AUTOPSY.[1]

DR. S. G. WEBBER said that he had been much interested in the paper, especially in the first case, which was rather anomalous. As the reader states, the causes linger after an epidemic, and now and then break out in sporadic cases. Such cases have occurred at Vienna since the last epidemic there. The speaker had himself seen a case in a neighboring town in which the symptoms developed ten days after a blow from a school teacher. This had been at first supposed to be their cause, but the disease was later seen to be cerebro-spinal meningitis, and this was confirmed by autopsy.

DR. J. J. PUTNAM referred to cases which have been reported (including one by Dr. Webber) in which the naked eye appearances of the membranes in undoubted cases of cerebro-spinal meningitis were negative, and also to the fact that spasms may be absent, or nearly so, throughout the sickness. Cases of this kind

[1] See page 125 of this number of the JOURNAL.

resemble in many respects severe cases of diffused neuritis.

Dr. Putnam also said that he had seen several children suffering with the sequelæ of cerebro-spinal meningitis, and that they were sometimes characterized by a peculiar oscillatory trembling of the hands, and sometimes localized atrophy of muscles.

Dr. Mason, in reply to Dr. Putnam's question as to the probable cause of death at a very early period in the disease, said that he supposed the fatal result might be due to shock. In cases fatal within a few hours, where the patients are struck down as if by lightning, the toxic influence is so powerful that the vital organs may cease to perform their functions before the anatomical changes in the nervous centres have developed. Sometimes, under such circumstances, the brain has been found to be anæmic and œdematous.

Dr. C. E. Stedman said that the different symptoms of the disease were illustrated by (1) a boy of eight years old who came home from school, and went out to play in apparent health; in the door-yard he had a fit, in which he died before Dr. Stedman could reach him, though answering the summons at once. The autopsy, in which Dr. Edes assisted, revealed cerebro-spinal meningitis, with deposits of pus. On the other hand, (2) a child, aged three, had cerebro-spinal meningitis, and was unconscious three weeks, taking little food and no medicine; at the end of that time he woke, was rational, called for his toys, and recovered. In regard to the connection between this disease and pneumonia, Immerman and Heller write of the Erlangen epidemic, that in fifteen cases meningitis complicated croupous pneumonia fourteen times and scarlatinal nephritis once. Dr. Stedman found one morning, in making his visit at the City Hospital, a man of sixty-five, unknown and unconscious, whom he recognized as a nurse. He died in a few hours, comatose, with paralysis of the left arm and ptosis of right eyelid. Autopsy showed cerebro-spinal meningitis. His former physician reported that he had just attended him through an attack of pneumonia, and in recalling the case, after the result of the autopsy was told him, he could recollect no symptom pointing to the brain or cord. The autopsy also illustrated the correctness of the diagnosis of pneumonia.

Dr. R. H. Fitz thought that the first in the series of cases reported was particularly interesting from the anomalous character of its symptoms. The course of the disease was so irregular that a certain doubt as to the exact nature of the process readily suggested itself. The low range of temperature in particular, in a disease whose synonym is "spotted fever," seemed especially noteworthy. If he had understood aright the temperature in general was in the vicinity of 99° F., exceeding this limit only in a single instance, somewhat late in the course of the disease. Although an atypical range of temperature was an important feature in the differential diagnosis between cerebro-spinal meningitis and other protracted febrile diseases, as typhus and typhoid fevers, the lack of type in the present instance seemed exceptionally characterized.

During the epidemic of 1873 Dr. Fitz had made numerous post-mortem examinations of cases of this disease, including those terminating fatally within ten hours from the beginning of the attack and those lingering for several weeks, if not months. The anatomical evidences of meningitis were always present, though in the extreme instances the macroscopic changes were far from being characteristic. A cellular infiltration of the pia mater was found in the fulminant cases, and the remains of the inflammatory product were seen in patients whose disease was continued throughout weeks and months. The extension of the inflammatory process into the cerebral ventricles, with the associated hydrocephalus, sometimes extreme, seemed of importance in explanation of the suddenness of death in certain cases, especially in those whose termination was rapidly fatal. A paralysis of respiration or an insufficiency of the heart might be regarded as the direct result of the greatly increased intracranial pressure, manifested not only by the obliterated furrows, flattened convolutions, and the anæmic brain, but also by the widely distended ventricles.

The reference made by Dr. Webber to the medico-legal importance of the recognition of cases of cerebro-spinal meningitis reminded Dr. Fitz of an analogous experience. During the late epidemic a young man was thrown to the ground in a drunken quarrel, his head striking a curb-stone. Death followed in the course of a few days, and evidences of a severe cerebro-spinal meningitis, without fracture of the skull, were found at the autopsy, which was made at the instance of the coroner. The question raised at the time concerned the relation between the violence and the lesions. It was concluded that the latter might have arisen independently of the violence, owing to the existing epidemic. The possibility of the lesions being excited by the blow could not be eliminated, although this alternative was regarded as less probable than the former in virtue of the appearances and the collateral circumstances.

Dr. Mason, in reply to Dr. Fitz's suggestion that Case I. was so anomalous in symptoms, especially in the low range of temperature, that the diagnosis might be questionable, said that it was not more so than many cases he had met with in the literature of the subject; that the best authorities called attention to the very great variety in temperatures or symptoms observed, so that so far no one who had not seen a large number of cases could be familiar with all the types. Cases with considerable depression might present a sub-normal temperature, as in Case II., but the axillary temperature is often a poor guide.

In Case I. Dr. Mason, after very careful observation in consultation with others, could find no more probable explanation of the symptoms, although he would be glad to have one suggested. The patient evidently had meningitis. Syphilis and tubercle could be fairly excluded, as the recovery was complete; and a simple idiopathic cerebro-spinal meningitis, if there is such an affection, must be very rare and undistinguishable from the disease in question.

Dr. C. F. Folsom said that in 1873 he had seen a case quite similar to the first of the five reported by the reader. The period of unconsciousness was somewhat longer, and the duration of the illness considerably longer, than in Dr. Mason's case. The patient was not able to resume his occupation until six months after his attack. The temperature was low, seldom going above 101° F.

Dr. Webber said, with reference to the point raised by Dr. Putnam, that during the epidemic of 1873 he had made an autopsy, in which, although no pus was seen by the naked eye, yet that microscopic sections had shown pus cells under the pia mater and in the substance of the cord.

The speaker had known total deafness to result from

an attack, and to remain unrelieved after six or eight years, notwithstanding much treatment from both physicians and quacks. He does not suppose this to be from a lesion of a nerve, but from disorganization of the labyrinth from infiltration of pus cells.

The symptoms vary as the brain or the cord is the principal seat of disease. He can well understand that, with cerebral lesions predominating, the temperature may be low. With regard to treatment, he recalls a case in which iodide of potassium was used with apparent good results. He does not remember whether ergot was used in the case or not. In simple cerebral meningitis iodide of potassium is of value, but it must be used in large doses, twenty or thirty grains four or five times a day.

DR. J. O. GREEN said that all the cases so far analyzed are insufficient to show the different conditions of deafness. They are not always the same.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.[1]

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

THE TREATMENT OF CLEFT PALATE.

DR. H. A. BAKER by invitation exhibited a patient for whom he had contrived an improved appliance for cleft palate, which is described on page 127 of this journal.

DR. HENRY J. BIGELOW remarked that he had been asked to say something upon this subject. It is quite exceptional that staphyloraphy alone without an obturator does much service to the speech. It is not difficult to get a union of the fissure, or of most of it, but the flaps are usually so tense afterward from the contraction of the dissected surfaces behind the palate that the play of the palate necessary to articulation is prevented. I have, therefore, usually recommended patients to get one of the varieties of artificial palate or obturator, whether inflexible like Suersen's, or flexible like Kingsley's, and to submit only to so much operation as may be necessary to keep it in place. After an operation patients expect to talk at once, but they cannot do so. A long education is needed to show any considerable improvement in alternating the mute and nasal consonants. As a rule there is no improvement of speech at first. Fifteen years ago I devised a short series of exercises in articulation for a patient I operated upon. It begins with the only consonant which a patient can usually best articulate, namely, "*t*" in "*tar*," and gradually leads to the rest, constantly referring to the acquired "*t*" as a point of departure. Here it is, as it was then printed for the private use of a patient: —

"The great difficulty in pronouncing correctly with a cleft palate is in distinguishing the nasals from the mutes; thus, p and b from m; pap or bab from mam; t and d from n; tat from nan; k and g (hard) from ng.

"'Tar' is well pronounced by most beginners with an obturator. When the beginner can pronounce 'stark' and 'car' he has the key to most of what here follows. The above words should be practiced carefully; not 'start' and 'tar,' but 'stark' and 'car,' and should be spoken loudly, or, as the elocutionists say, 'exploded.'

[1] Concluded from page 104.

1.	tar	artar	kar	arkar	kar
2.	kar	arkar	arkgar	kgar	gar
3.	kar	arkar	arkdar	kdar	dar
4.	kar	arkar	arkpar	kpar	par
5.	kar	arkar	arkbar	kbar	bar
6.	kar	arkar	arklar	klar	lar
7.	kar	arkar	arksar	ksar	sar

Practice all the above with the following vowels: —

8. o as in coke.

Thus, instead of kar, akar, etc., ko — oko — oklo — klo — lo

9. a (long) as in cake.
10. i as in kite.
11. e as in keep.
12. u as in suit.

13.	kar	arkar	arngar	arkar	arngar	kar	ngar
14.	tar	artar	arnar	artar	arnar	tar	nar
15.	par	arpar	armar	arpar	armar	par	mar
						bar	mar
						dar	mar
						sar	rar

(Practice reading loudly from a book.)
"*February*, 1870."

DR. GEORGE F. GRANT spoke as follows: In the physiological treatment of cleft palate there are many points which require the most careful consideration. I have listened to the paper of Dr. Baker with great interest because the subject is one to which I have devoted much time and attention, and during the past fourteen years have treated over seventy cases of congenital cleft palate. While I may claim to have succeeded in almost every case in securing a good articulation there have been great variations in the degree of success as well as in the length of time which is required for the patient to master the art of distinct articulation and enunciation.

At the commencement I made the mistake of expecting too much from the appliance unaided by proper direction to the patient in its use, that is to say, after adjusting the palate it was my practice to give the patient an exercise in sounds simply requesting him to follow me in their pronunciation. This plan did not prove satisfactory in all cases, and I now often wonder how so many did so well under so imperfect a system of training.

It soon became plain to me that patients of this class required to be taught the art of correct articulation technically, just as we are taught any other art which depends upon accurate technique. This fact applies also to the sister art of enunciation, and although there is quite a wide difference between these two factors of speech they are so closely allied in this particular branch of study that they may be considered as one in speaking of them in this relation.

I found that this class of patients is almost universally deficient in the management of the breath; that in the use of the voice they speak directly from the lungs without any check at the larynx as is the case in normal speech, and where this fault does not exist they attempt the closing of the nose by using the depressor muscles of that organ and disfigure the face greatly thereby.

While this fault exists, the development of correct habits of speech is impossible; for many, if not all the sounds of the language require for their proper enunciation that the air column be under the most perfect control. For example, most patients are quite unable to give the sounds of those letters which are classed as labials, with any force whatever after being taught the method, simply because they do not have the power

of sustaining a sufficient pressure of air. The proper thing to do is first to teach them to control the breath. It is best to give them a tube of some description, and teach them to blow through one end while the other end is immersed in water; the bubbles which arise are a good indication of the progress which is being made. They are then taught to check the air in the throat by the tongue, and by distending the cheeks make a reservoir of the mouth which furnishes air to the tube while the lungs are being filled through the nostrils so that a continuous stream of air passes through the tube. This, many of you will recognize as the method of using the blow-pipe, familiar to chemists and artisans. I know of no plan which so rapidly gives the patient that control of the breath so necessary to the first steps in articulation. This practice gives tone and strength to the lips and cheeks, the muscles of which I have observed to be much weaker than in persons of normal formation. I have seen many patients who could apparently distend the cheeks as well as any one, when in reality there was little or no pressure upon the inside, and the act was a fictitious one, as the cheeks would not sustain percussion.

After I have taught a patient to direct a column of air through the lips and to control its passage, it is much easier to instruct him in applying those modifications to the air current which constitute articulate speech. These modifications are taught singly, and the proper position and conditions of the organs employed in the production of a sound are ocularly demonstrated, first, because the patient can more quickly understand what he can *see;* secondly, because it is of great importance that the best skill should assist in developing the work which the appliance is designed to accomplish.

I have only time to say that this plan or system which has been slowly and practically developed, has for its basis the reduction (by analysis) of speech to its simplest mechanical principles, and no effort has been spared to bring the mastery of those principles within reach of the most ordinary intelligence. I do not agree with much that has been written and said regarding the classification of the sounds in the language. But I have one remark to make regarding the most common error, which, as I believe, can be shown by a little reflection. It is a common belief that patients of this class must struggle with the consonants, while the fact is that with a few exceptions the vowel sounds are much the most difficult to teach them, because the vowels are more dependent upon the quality of the voice as a whole than upon any position or local arrangement of the organs of speech; consequently a patient may be technically correct as to articulation and have a most unpleasant enunciation, due entirely to faulty location of the vowel sounds. That is, a patient may be able to give the sounds of simple single letters or elements, and yet be unable to converse or read distinctly because the voice has not received attention.

Few of these patients have made use of the anterior portion of the mouth in their efforts to articulate. Their whole mechanism has been misdirected to an almost vertical line with the larynx, so that if the same line were followed with a normal palate the voice would pass through the nares behind the palate instead of being thrown upon the anterior portion of the soft palate and the whole of the hard palate, and thence by reflection through the lips, as should be the case.

If you have followed me to this point you will observe that I have first taught the patient that he must have the air to make the sounds under his control; secondly, he has been taught how to employ it in conjunction with the organs of speech in forming the parts of speech; now it remains to show him where to put it. We all agree that those sounds, or tones rather, which have the best penetrative power and are most clearly enunciated have a high or sharp pitch; then the next thing to consider is how is it produced. Why are some men's voices so much clearer in tone than others? Some of it is due no doubt to anatomical causes, — the height of the dome of the palate for instance. But still there are physiological reasons. The man who enunciates best, and whose voice has purity and clearness of tone, makes it better still by careful study and training. He brings the focus as far forward upon the palate as it is possible to do; the sound wave from the larynx is projected as far upon the anterior portion of the palate as possible by holding the head in an erect position and opening the throat, bringing the tongue forward. It is this very point which it is important to impart to a cleft palate patient, and which it is necessary for him to master in order to complete the work which an artificial palate makes possible.

No enunciation is good without it; no articulation can be secured which will repay the trouble unless careful attention is given to these points, and I have seen so much accomplished by these methods that it seems almost a possible thing to train a patient into a fair articulation without any appliance. Two quite remarkable cases have come under my notice. In both the fissure was quite large, in one patient extending through the soft palate, in the other through the soft and half way through the hard palate. In both cases the articulation was remarkably good, and either by accident or training the method in one was almost faultless, so that I advised the patient to let well enough alone.

A word about appliances. Dr. Baker's appliance seems to me to be the addition of a hinge to a modification of the Suersen obturator, made by Dr. Kingsley, of New York. The original Suersen obturator was a solid bulb of hard rubber, so shaped as to retain contact with the divided palate under all conditions, and at the same time close the opening into the nares by the contact with the superior constrictor of the pharynx. Dr. Kingsley's improvement consisted in making the bulb hollow and placing it so as to slide upon a bar until the most effective position was determined, and then securing it in the desired position. The method of making the bulb hollow, and the conclusions at which he arrived regarding the comparative value of the Suersen and Kingsley systems, may be found in the book on Oral Deformities by Norman W. Kingsley.

Dr. Kingsley is of the opinion that a soft rubber appliance is best to acquire articulation with, while the hard rubber might be inserted with good results after articulation has been acquired, and I coincide with that view; for when a case of cleft palate has been brought to a successful result, and the palate is then removed, the patient is in a position analogous to perforate palate.

The articulation exists and only requires mechanical aid, so that whatever meets that requirement suffices.

There are objections to soft rubber as a material, but it has proved of too much benefit as an aid in giving

the best results in acquiring good articulation, and in that respect surpasses anything which I have seen. I do not think Dr. Baker did it justice in his remarks upon it; for he must have known that if it was properly made the die in which it was made was a permanent mould which rendered the vela capable of easy and limitless duplication, and so easy of adjustment that it could be sent to any part of the world, or, if necessary, made or duplicated by any dentist who would follow the directions which accompany it.

The cleanliness depends upon the individual, as does the cleanliness of anything worn about the person.

The best results are dependent solely upon skillful manipulation, and no appliance can be successfully adapted by an unskilled hand. There can be no fixed rule to follow; each case presents new features, which must be met as they appear. My preference is for the soft rubber, because it more readily fulfills the requirements, and because it has done better work than any appliance which I have yet seen, though I have seen a few cases in which the hard rubber obturator had proved very beneficial.

I will not intrude further upon your time than to say that one of my greatest complaints against the Suersen principle has been that it seems almost impossible to obtain a clear voice with it, a fact which I have attributed to its thickness obstructing the posterior portion of the nares, and in Dr. Baker's appliance I cannot see that the hinge obviates that difficulty.

The patient was then introduced, and the appliance could be seen in the mouth, and, by causing him to swallow, the relation of the instrument to the wall of the pharynx and to the alæ of the velum palati could be easily observed. It was evident that in the act of deglutition no communication between the nasal cavity and the pharynx existed, the posterior part of the obturator being raised up by the superior constrictor muscle of the pharynx, and pressed firmly against the posterior wall of the pharynx at the line of the naso-pharyngeal junction. The patient now removed the appliance, when an enormous fissure was disclosed, extending from a point near the incisor teeth through the entire hard palate and velum. Upon being asked to read, it was quite impossible to understand what the patient was saying. After replacing the appliance the same sentences were read, and every word was spoken with great distinctness, and could be easily understood by every person present. After this the patient was asked to read some new selection, and opening a book at random, commenced as follows: "Physicians generally agree that the moderate use of wine is beneficial." At this point the audience, pleased with the improvement in speech, and possibly desiring to express approbation of what was read, burst into applause, and appeared to be perfectly satisfied as to the usefulness of this instrument in cases of cleft palate. The patient remarked that he found the greatest comfort and solace in the fact that with the appliance in his mouth he was able to smoke, while without it he could not draw the vapor of the tobacco from the pipe into the mouth. With it, also, he can whistle, which he cannot do without it.

On motion of DR. MARCY it was voted that the thanks of the Section be rendered Dr. Baker for his important communication of original studies upon a most difficult subject and demonstration of ingenious mechanical appliances for the remedy of cleft palate.

On motion of DR. PRINCE a vote of thanks was tendered to the retiring chairman, DR. GEORGE B. SHATTUCK, for the zeal and fidelity with which he has conducted the deliberations of the Section during the past two years.

Adjourned at eleven o'clock.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

THURSDAY evening, January 10, 1884. The President, DR. TYSON, in the chair.

OSTEO-MYELITIS OF TIBIA.

Exhibited by DR. C. M. WILSON.

G. L., aged forty-two, was admitted into the surgical ward of the Pennsylvania Hospital November 26, 1883. Sixteen days previously he had been knocked down on shipboard, and had sustained a wedge-shaped fracture of the tibia and an oblique fracture of the fibula of the right leg about the middle. When admitted the fragments were in malposition and partially united. There was considerable deformity, the lower fragment of the tibia being tilted up and overlapping the upper fragment. By appropriate treatment the fracture was retained in fairly good position, and the case was progressing favorably until the afternoon of December 26th, just one month after admission, when he had a severe chill, followed by a temperature of 103.5° F. He complained of violent pain in left shoulder-joint. He was treated with salicylate of sodium. Next morning his temperature was 102.5° F., with intense pain in both shoulders and elbows. The same anti-rheumatic treatment was continued under the supposition that the case was one of acute articular rheumatism, the man having been exposed to a draught. The afternoon of second day he had a severe chill, with an evening temperature of 104.4° F., and a presystolic mitral murmur was detected. Dr. Wilson now considered the case to be one of pyæmia, and gave massive doses of quinia, stimuli, and digitalis. The man steadily grew worse, and died of exhaustion on the morning of December 30th.

Post mortem twenty-six hours after death. Rigor mortis marked. Body well nourished. Posterior portion of body much discolored; extensive ecchymoses over arms and shoulders. Smaller patches over abdomen and chest. One and one half ounces of clear serum in the pericardial sac, with many ecchymoses over the surface of the heart. Both sides of heart relaxed and partially filled with post-mortem clots. The valves on right side appeared normal. The aortic valves were incompetent, and their free borders were roughened by recent vegetation. There was also some slight thickening and contraction. The mitral valves showed old thickening as well as signs of recent inflammation. The endocardium of the left ventricle showed numerous spots of ecchymoses. The heart weighed sixteen ounces, and its tissue was a good deal softened. Spleen normal. Left kidney weighed seven ounces, was somewhat swollen, and its tissues were slightly flabby. The capsule was thickened and somewhat adherent. The organ was congested and somewhat swollen. Right kidney weighed six ounces, and presented the same appearances as the left. Liver was large, swollen, and marked by the ribs. Its surface

was mottled with rounded yellowish patches surrounded by dark-red areolæ. Section showed it to be markedly congested. Its weight was four pounds four ounces. Lungs much congested. The base of the left being anteriorly bound down by old adhesions. The brain was not examined. Examination of the fracture showed it to be ununited, and there was no callus detectable. The periosteum tore easily. On section the medullary cavity of the tibia showed marked evidences of inflammation. There was a puffy septum of granulating tissue between the ends of the fragments. Above there was evidence of extravasated blood, and two and one half inches above the line of fracture there was a small circumscribed medullary abscess. The medullary cavity was inflamed and streaked with red lines.

Through the kindness of Professor Brinton and Dr. Longstreth, Dr. Wilson was enabled to show several pictures illustrative of osteo-myelitis. This is the only case of death from simple fracture recorded at the Pennsylvania Hospital. This disease must be a very rare sequel of simple fracture. It is not necessarily a fatal disease, as the inflammation may become circumscribed, a depot of pus formed, and the destructive processes end there, or a portion or the whole of a bone may die or be removed. It is easy to see how a virulent inflammation going on to suppuration with no vent to the pus, as in this specimen, could readily give rise to septic poisoning. I am indebted to the courtesy of Dr. Longstreth both for the specimen and assistance in its preparation.

Dr. Tyson said that he had seen many cases of osteo-myelitis from gunshot injuries during the late war, but he could not recall a case where the medullary canal was encroached upon by a condensing osteitis, as in this specimen.

Dr. Nancrede related a case of fatal septic trouble following a simple fracture of the thigh, where the starting point seemed to him to have been a superficial ulceration of the skin, produced by the adhesive plaster. Possibly section of the bone might have revealed an osteo-myelitis, but as the fracture was firmly united, he thought that the skin abrasion was the starting point, and related two cases of pyæmia produced by equally trivial causes.

Dr. Longstreth related a case seen by him when a resident physician at the Pennsylvania Hospital. The patient had a fracture of the thigh of three weeks' standing, and was apparently doing well, when chills, sweats, lung consolidation, etc., etc., ushered in a fatal attack of pyæmia. A post mortem revealed osteo-myelitis and general pyæmic manifestations. A possible explanation of Dr. Wilson's case was that the man had been on board ship for three weeks after his injury, where the treatment must have been of the crudest description.

Dr. Eskridge called attention to the endocardial trouble found in septic disease, which he had been taught as a student to consider was of an ulcerative form, and of fatal prognostic import. He had, however, seen two cases which presented all the symptoms of ulcerated endocarditis, but which had recovered, while in two others with a similar clinical history post-mortem examination revealed only a simple non-ulcerative endocarditis.

Dr. Shakspeare asked whether this condensing osteitis might not have been due to a previous syphilitic trouble.

Recent Literature.

A Manual of Psychological Medicine and Allied Nervous Diseases. By Edward C. Mann, M. D. Philadelphia: P. Blakiston, Son & Co. 1883.

This book on insanity comprises 700 full-grown pages, to say nothing of some illustrations. Why it should be called a "manual," unless because it was written by Mann, we are at a loss to see, as Worcester defines a "manual" as "a small book, such as can be carried in the hand," and this book is large enough to be carried around in a shawl strap. The original contents, however, if boiled down, would easily go into the vest pocket.

Dr. Mann has adopted the old-fashioned plan of bringing together a large amount of material from a great variety of very good authors, and has strung this together on a slender and often invisible thread, and with so little *zusammenhang* that sometimes there is little relevancy.

His History of Insanity covers one page. Next he begins on Classification, recommending the simple and childish system of Krafft Ebing. This covers two pages. On the middle of the next page he branches into the making of autopsies. On the next page he gives definitions of insanity until he suddenly remembers that he was on the subject of classification, and returns to this again toward the bottom of the page.

After a short chapter on the Ætiology of Insanity, he has a chapter of two pages on the Prevention of Insanity. Why he breaks in on the usual custom followed, and puts in a few words just here on this subject instead of at the end of the book, he does not say.

Chapter IV. has nineteen pages on the Diagnosis and Prognosis of Insanity. Chapter V., sadly out of place, has eight pages on Civil Incapacity. Chapter VI. has nine pages on General Paralysis of the Insane, of which Dr. Mann has the very correct idea that it should be called general paralysis because it is no paralysis in particular. Chapter VII. treats of Idiocy, Dementia, Folie Raisonnante (Syn., Moral or Affective Insanity)."

After a chapter on Mental Responsibility, etc., in Criminal Cases comes a chapter on The Histology and Functions of the Cerebrum.

These specimens of the arrangement of the book will show with what incongruity and lack of system the book is written, and as these faults are combined with those of general incompleteness and a marked lack of thoroughness of treatment of most of the subjects discussed we should say that time would be utterly wasted in reading the book.

We regret the necessity, but it becomes our solemn duty, in the interests of good psychological writing, to openly declare that this book, in our opinion, is a complete *failure.*

— On account of the departure of the Senior Editor, Dr. Pilcher, for Europe, in January, and the expected departure of his colleague, Dr. Fowler, for a similar trip abroad later in the season, the publication of the *Annals of Anatomy and Surgery* is necessarily suspended during their absence.

Medical and Surgical Journal.

THURSDAY, FEBRUARY 7, 1884.

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THE SIMULATION OF STONE.

FEIGNED diseases form an exceedingly interesting class of cases, though the majority of malingerers fall under the notice of the military and naval rather than of the civil surgeon. In times of general conscription such attempts at fraud are most frequent, and show the greatest ingenuity on the part of the malingerers, calling for equal acuteness for their detection. In France the time of the first Empire was most prolific in such attempts to escape military duty, and many will recall the published lists of the exempt and the disease on which their exemption was founded during the conscription at the close of our late civil war. But even the quietest and least suspicious of civil practitioners is liable to be deceived, as some of the most carefully studied attempts at deceit have been devised and executed without the exciting stimulus of the desire to avoid military duty. One of the most baffling cases was given in this journal some three years ago of the "dummy chucker," or executor of epileptic fits, for the opportunity offered to his accomplices, during the excitement attendant on the fit, of robbing the bystanders. Few cases are so skillfully executed as in the case of this criminal, who boldly "chucked his dummy" in the court room and in hospital wards.

The feigned diseases embrace a wide list of subjects, and under the same general heading which includes the fraud who simulates a disease which he has not must be classed the individual who, wounded or sick, exaggerates the gravity or conceals the cause of the complaint.

An important contribution to the literature of feigned diseases has recently been made by Dr. Brongniart, of Contrexéville. He narrates three cases, all females, which have come under his own observation, in which the pretense was made that stones had been passed from the bladder, and these pretended calculi were preserved and exhibited. Twenty-two similar cases are referred to as found in the literature of the subject, of which one was a man, four were boys, and the rest females. The only adult male case is one narrated by Civiale of an officer who claimed to have been cut for stone just after the retreat from Moscow. The stone that he exhibited was remarkable for its size and polish; a section proved it to be but a common pebble. Reverence for the great lithotomist forbids us to intimate the possibility that both narrator and officer were deceived by the "Jewish surgeon," who desired to retain the fruits of his own prowess and presented to his patient the most convenient substitute. Of the boys, the most interesting case is that of a little fellow of ten years, sent in 1791 to Deschamps for lithotomy. His mother showed pebbles which she had seen issue from his meatus. The boy actually had a stone, was cut, and a true calculus removed at the Charité, and after his recovery confessed that fear of the operation with which he was threatened had induced him to persuade his mother that he was passing the stones himself without the assistance of a surgeon.

The three cases of Brongniart have little if any relation with those numerous cases in which erotic individuals of both sexes introduce various articles into the urethra; they are rather manifestations of a hysterical neurosis. The patients did not always introduce the false calculi into their bladders, but contented themselves with the declaration that they were found in the bed or the receptacle of urine. Had they taken the precaution to procure genuine urinary concretions for exhibition it might have been impossible for the physician called in after their pretended nephritic colic to have discovered or even suspected the fraud.

Suppose that the doctor has, from some point in the appearance of the gravel, a doubt of its authenticity, which is converted into certainty by chemical analysis, shall he consider it as an ordinary deception without motive? Shall he reject as false all the patient's sufferings? Our author does not believe it. It is one's duty, on the contrary, to inquire carefully into the history and heredity of the patient, and if hysteria is manifest in herself or her parents he will perhaps find that the simulation is the consequence of a painful form of hysteria, of a nephralgia, or a cystalgia, of which the real pain must not be overlooked by the discovery of the added deceit. Various authors are cited to show that hysteria may provoke painful phenomena and functional trouble on the part of the urinary organs. One can then easily imagine that a nervous woman, perfectly honorable, without a premeditation of deceit, may be attacked with a hysterical nephralgia so resembling nephritic colic as to deceive even the attending physician. "All the world," commencing with the patient, believe in the existence of the gravel; but after many returns of the attack and no appearance of anything to confirm that opinion one begins to doubt the truth of the diagnosis. The terms "nervous attack," "hysterical crisis," come to the ears of the patient, and to avoid the unpleasant name hysteria she takes pains to demonstrate at her next attack the reality of her pain. A course of deception once entered upon she will not willingly inculpate herself, and the deception may be continued for months and even years.

One of these cases must serve as a sample of the class.

Mlle. B., eighteen years of age, slightly chloro-anæmic, was subject to various nervous accidents. These nervous attacks were attended with very acute

lumbar and abdominal pain, difficulty of micturition, and convulsive movements. Having had occasion to assist in the care of an aunt suffering from nephritic colic, Mlle. B., after one of her painful crises, showed gravel which she said she had found in her urine, and more was found in her bed. There was no longer doubt in the mind of her physician as to the character of her disease; she had nephritic colic, and was sent for treatment to Contrexéville. The young girl belonged to an excellent family, and there was no reason to suspect the truth of the story, but the father had brought with him and showed to Dr. Brongniart the gravel, which was seen to be made up of particles of quartz and fragments of brick. At a private interview, the father refused entirely to believe in the Dr.'s explanation, and the suspected gravel was forwarded to Dr. Méhu at Paris for examination. An answer was returned which convinced the father, who became vehement in denunciation of the falseness of his daughter, whose defense the doctor was obliged in his turn to undertake. He told the angry parent that the pains suffered by his daughter were real, that the nervous crises were not simulated, but that they were of a hysterical nature, and that hysterical people were often uncontrollably impelled to reprehensible acts, as, for instance, simulation or theft, without it being possible to consider them actually responsible for these unhealthy impulses. This was a ray of light for the unhappy father, who then revealed certain facts in the history of the mother of the young deceiver, who had been the victim of kleptomania, taking the most worthless objects, necessitating her temporary detention in an asylum.

This nervous heredity explained and excused to a certain extent the simulation of which the young lady was rendered guilty under the combined influence of an imitative impulse and the neuralgic pains of hysterical character. The urine, though often examined, was always found absolutely normal in this case. A suitable regimen was prescribed, and nothing more was heard of the case.

Our limited space permits us only to add the conclusions which Dr. Brongniart draws from his consideration of the subject: —

The simulation of urinary gravel observed sometimes in young boys is much more frequent among females.

The motive for that deception in boys may be that of all other deceptions, idleness, the desire of exciting interest and pity; perhaps erotic motives.

In women and girls the same motives may exist as in boys; much more likely in them are erotic motives as a determining cause. Nevertheless, outside of all depravity, the simulation of urinary calculi may be determined by hysteria under the form of nephralgia: with the purpose of evading the ill-sounding epithet of hysterical, these invalids prefer to give to their sufferings the name of nephritic colic, which induces them to show the fictitious stones.

One ought always to analyze with care the urine and gravel from young boys and nervous women who declare themselves afflicted with stone.

BOSTON'S IMPROVED SEWERAGE SYSTEM.

On the first day of January the new system of intercepting and delivering sewers for that part of Boston situated between the Charles and Neponset Rivers, which has been in construction for a number of years, was inaugurated. Members of the Massachusetts Medical Society will recall that they were invited during the last annual meeting of the Society to inspect the main sewer, and those who did so are somewhat familiar with the system of which it forms a part. As the growth of the city demanded, sewers were built years ago, each emptying at a locality most convenient and least annoying. According to the new plan a series of intercepting sewers has been constructed belting the city and communicating with the older sewers near their mouths by means of small branch or connecting sewers, provided with gates to regulate the flow. The old outlets are to be for the most part kept open, to be used for storm overflows, and those below tide level will be provided with a double set of gates to prevent the tide from flowing in.

The great bulk of the sewage is, however, by the new system to be conveyed to a considerable distance from the shore, and deposited where it is believed, and thus far proved, that it will not be obnoxious or injurious. The various intercepting branches converge into one main sewer, which runs in nearly a straight line to old Harbor Point, Dorchester, where there is a pumping station. At this point extensive works have been erected, the first of which is a filth hoist, through which the sewage passes before it reaches the pumping station. The filth hoist consists of two chambers, in each of which are hung, so as to be raised and lowered by winches, open cages through which the sewage flows and which retain any large floating objects that would injure the pumps. They are arranged in pairs, one behind the other, so that one may be in place while the other is drawn up for cleaning. Four engines, each of a capacity to raise 25,000,000 gallons in twenty-four hours to a maximum height of forty-three feet, are now in position, and it is designed eventually to double this pumping capacity, allowance having been made for two boiler houses.

The outfall sewer extends from near the engine house to the reservoir on Moon Island, a distance of a little more than two and a half miles. The first portion of the outfall sewer, a section of 1200 feet, is the deposit sewer, which is carried into Dorchester Bay on an embankment; the second portion, having a horizontal length of 6970 feet, is the tunnel under the bay in the form of an inverted siphon, at whose entrance is a vertical descent of 150 feet, the level being regained at the farther end by a rise of one foot in six; the third portion extends from Squantum Neck on the farther side of Dorchester Bay to Moon Island, where it connects with a reservoir having four compartments with a total capacity of 25,000,000 gallons, from which the sewage is discharged at ebb tide into deep water by an outlet sewer.

The total estimated cost of these sewers for the south side of Charles River, including an allowance of

$300,000 for rebuilding and connecting old sewers, was placed in 1876 at $3,750,000. The actual cost has been thus far about $4,500,000, and $750,000 more will be needed, but much of the work proved far more difficult than was expected, and several contractors met with serious losses. The important thing is that the work seems to have been well done, and the system to practically answer the expectations that were formed of it. For the district on the north side of Charles River a main sewer and branches of fifteen miles length with other works, at a cost of more than $3,000,000, will be required, but are not yet contracted for.

In addition to relieving the waters of Charles River and its flats, which had become extremely offensive, the present sewers, providing for a constant and uninterrupted flow of sewage from its entrance to the outfall sewer, deliver the city from the cess-pool tendency of the old sewers; whether the level of the ground-water will be lowered, as was at one time anticipated, it is as yet too early to determine.

It will be easily seen that with the surface drainage of the city and the great consumption of water, — between ninety and one hundred gallons per head daily, — the sewage, when reaching Squantum or the reservoir on Moon Island, will be extremely dilute, yielding but a small percentage of solid constituents and those of a soluble character. It is not reasonable to anticipate any annoyance from its discharge into deep water on an ebb tide, either to those navigating this outer portion of the harbor or to those occupying neighboring shores; the full sewage product of the district drained is not as yet discharged through the intercepting sewer, but of the large amount which is discharged all trace is dissipated in the ocean even more readily than was anticipated. Whether any other disposition could be advantageously made of this sewage when once delivered at Squantum or at Moon Island is a subject whose discussion we reserve for another occasion. Enough is already known, however, of the working of the present system to permit us to say that those who designed and executed it deserve well of the city, as will doubtless be evidenced in due time by a diminished death-rate, and more immediately by a relief of offended senses.

CREMATION IN CHINA.

In the last issue of the Chinese Imperial Maritime Customs Medical Reports Dr. A. Henry contributes some remarks upon cremation in that country. Marco Polo repeatedly asserts that the Chinese wherever he traveled were in the habit of burning their dead; on the other hand Chinese historical works make no mention of the practice, and burial is the almost universal custom at present. The books in which the subject of cremation in China is treated only speak of it as being practiced upon the bodies of Buddhist priests and lepers. In only one, however, of the many Buddhist temples at the town where Dr. Henry is stationed are the bodies of the inmates burned after death. The method of incineration is commendable as efficient, æsthetic, and inexpensive; but it is too slow except for Buddhist priests in China. In the grounds of the temple is a small dome-like edifice, the interior of which communicates with the open air by a small door only — a charcoal kiln, in fact. The dead priest is placed in a sitting posture inside the dome, and charcoal and firewood are piled around him; fire is applied, and the door is shut until combustion is complete.

Children are sometimes cremated, but for superstitious reasons only. When several young children of a family have died in succession the body of one of them is burned under the belief that this ceremony will insure the survival of the next child born to the family. In these cases the body is simply brought to an open field in a box and placed upon firewood which is ignited.

China and India are preëminently countries in which a rational system of cremation might be encouraged with much advantage.

MEDICAL NOTES.

— Patrick B. Tully, a new representative in Congress from California, has introduced in the House a bill refusing the privileges of the mails to the advertisements "of any medical preparation, compound, or prescription, or any punch, bitters, cordial, or similar compound or preparation to be used as medicine or mixed with food, liquor, wine, or other substance used as a beverage or as food or medicine," unless the manufacturers thereof can procure from the Federal Patent Office a certificate that it is not noxious or dangerous to health. The progress of this bill will be watched with interest, but it will doubtless be beset with many difficulties, so that prognosis for its survival should be very guarded.

— M. Paul Bert is not, as the sound of his name might suggest, a hyperborean, but a French *savant* who has made an "eloquent" plea against the American hog before the Legislative Chamber. His views on the liability of trichiniasis resulting from American pork are contrary to those of most other leading scientists of Europe. The persistency of his attack and the resulting legislation have opened the eyes of some American traders to irregularities in the composition of French wines and liqueurs of which they were before oblivious. The principal point of medical interest in the argument of M. Paul Bert, however, is his statement that trichiniasis is more frequent in France than generally believed, owing to its being often mistaken for typhoid fever. Though there is an implied compliment to the therapeutic ability of the Frenchmen in that the recent mortality of their so-called typhoid fever exhibits no increase even though it is the result of an average between the mortality of trichiniasis and true typhoid, still as a reflection on the diagnostic and pathological acumen of his countrymen the remarks of M. Paul Bert must have had a frigorific effect.

— It is said that the tooth manufacture of the United States amounts to 10,000,000 teeth per annum. There are twelve manufactories, but one of them, founded in 1864, makes half the number. The

value of these teeth is a million dollars. The materials of which they are composed are feldspar, kaolin, and rock crystal.

— Dr. Lemoyez, writing to the *Bulletin Générale de Thérapeutique*, recommends parenchymatous injections of pure sulphuric ether for sebaceous cysts of the face and scalp. A case is reported of a man who was relieved of a wen of five years' growth by ten hypodermic injections of ether practiced at intervals of a day or two. The result was the conversion of the tumor into a cyst with fluid contents, the evacuation of the same, and speedy destruction of the cyst wall by inflammatory action. The injections are made into the interior of the cyst, five or ten drops at each sitting, the needle of the hypodermic syringe being moved about so as to break up the contents as much as possible. They are discontinued when inflammation or suppuration begins. In the case quoted the treatment resulted in a perfect cure in a month without keeping the patient in bed or restricting his movements as would have been required by the ordinary operation.

— The New York *Times* of January 12th contains an editorial on the Longevity of Doctors, which the editor evidently thought would be amusing to his readers. So it is. The article is based on the list of English practitioners who have died at an advanced age during the last four years. The writer attempts to account for their long life by enumerating in a serio-comic strain the healthful features of a doctor's life, chief among which he places the fact that doctors as a rule swallow little medicine. He then enumerates the pleasures which his profession yields him, and gives vent to the following sentence: "The physician meets with quantities of interesting diseases, and is always hoping to be the first to describe some new disease to which his name will be forever attached, like the popular diseases discovered by Messrs. BRIGHT and COX respectively!" Evidently the funny man's Latin enables him to translate *morbus Coxæ* into Cox's disease.

NEW YORK.

— Truly this is the age of progress (?). At the last meeting of the County Medical Society (New Code) a resolution was adopted urging the passage of a pending bill before the Legislature establishing a State Medical Board of Examiners *composed of regulars, homœopaths, and eclectics*, whose prerogative it shall be to determine upon the qualifications of candidates for the degree of Doctor of Medicine, now vested in the various medical colleges. The bill provides that the examiners shall be appointed by the Governor.

— The fourth course of the Cartwright Lectures of the Alumni Association of the College of Physicians and Surgeons was delivered in Association Hall by Prof. Burt G. Wilder, M. D., of Cornell University, on the evenings of February 2d, 4th, and 6th, his subject being Methods of Studying the Brain. The first lecture was devoted to a consideration of the limits of the subject of macroscopic encephalic morphology and the methods of regarding the brain based upon its condition in embryos and in amphibia; the second to the methods of preserving and examining the brain; and the third to the methods of figuring and describing the brain.

— A slight fire occurred in Charity Hospital January 27th, which might have been serious had it not been for the presence of mind and energetic action of Dr. Seaman, chief of staff. It occurred at 5.15 in the morning on the third floor of the section of the building occupied by the house physicians and surgeons, and one of their number, Dr. Weiss, was nearly asphyxiated with smoke. It was thought that the fire was caused by the steam-heating pipes.

— Mayor Low, of Brooklyn, has reappointed Dr. Joseph H. Raymond Commissioner of Health of that city.

— Dr. Elisha Harris, secretary of the State Board of Health, died of peritonitis, after a brief illness, at Albany, on the 31st of January. He was born at Westminster, Vt., March 5, 1824, and received the degree of M. D. from the College of Physicians and Surgeons, New York, in 1849. In 1855 he was made superintendent and physician-in-chief of the quarantine hospitals on Staten Island, and during the greater part of the late war he was a member of the National Sanitary Commission. For a number of years afterward he was connected with the New York Board of Health, and on the organization of the State Board of Health, in 1880, he was appointed its secretary.

Correspondence.

LETTER FROM LONDON.

LONDON, *January* 24, 1884.

MR. EDITOR, — At his last ovariotomy Mr. Knowsley Thornton remarked that if the case then on the table recovered, — and he saw no reason why she should not, — it would complete a line of seventy cases which he had done at the Samaritan Hospital within the two years ending February 23, 1884, *without a death*.

As I happen to know personally, these cases have not been "picked," but represent all grades and conditions of ovarian tumors.

If we go back some forty-five or fifty years to the time when Bright was engaged in writing his famous papers on abdominal tumors, and compare that period with the present, we are forced to exclaim that the stride made by abdominal surgery is little less than miraculous. Then it was the practice to puncture the abdomen and draw off the contents of the tumor as often as it refilled and became troublesome, or until the unfortunate patient died of exhaustion or peritonitis or from septic poisoning produced by suppuration of the growth. Then opening the abdomen was an experiment little resorted to, and when attempted generally resulted in such disaster that even progressive men like Bright were inclined to look upon it with suspicion and disfavor. On this point he says: "I believe as far as *cure* is concerned the malignant ovarian dropsy admits of none unless we may consider the excision of the tumor in that light, and *this must ever*

be so doubtful an operation, surrounded by so much darkness and attended with so much danger, that I can only look upon its happy event as the fortunate result of a bold and hazardous enterprise, which should not tempt us to adopt it as a rule of practice." [1]

What would Bright have said could he have penetrated the future and foreseen Keith's seventy-six consecutive "excisions of the tumor," without a death, and now Mr. Thornton's brilliant results?

Until Professor Bigelow demonstrated to the contrary, surgeons were always talking of the intolerance of the bladder and urethra, making this a *bête noir*. The peritonæum has also been considered in a similar light, and only within the past few years have surgeons begun to learn that it is not so very intolerant after all, and admits of some pretty rough handling without any particular danger to the patient.

Armed with this knowledge and Listerism the specialist now seems ready to attack any of the abdominal morbid growths, and with a tolerable certainty of success. I say *specialist*, for I do not believe that the general surgeon, however skillful and learned he may be, can compete with one who devotes a large part of his time to abdominal surgery alone, and the many opportunities which I have had of witnessing operations by both verify the statement.

On the 18th inst. Mr. Thornton removed by laparotomy a large fibro-cyst of the uterus, amputating the latter near the middle of the cervix. The spermatic arteries having been tied, Koeberlé's *serre-noeud* was used to constrict the cervix. The "stump" was treated by the extra-peritoneal method. It is now the fifth day since the operation, and the patient is doing well.

On the 8th Mr. Meredith operated on a hydatid cyst of the liver. This case is of especial interest, as the patient came under Mr. Meredith's care about a year ago and underwent a similar operation; the one case I know of where the same abdomen has been twice opened for the removal of hydatids. The patient is now convalescent.

Both Thornton and Meredith continue to use the spray, and operate in a thoroughly antiseptic manner; and I fancy that their excellent results are partially due to this fact.

At the last meeting of the Obstetrical Society of London a very interesting paper On Observations of Puerperal Temperature, by Dr. E. S. Tait, was read. The article dealt almost exclusively with the relation of nervous impressions or disturbances to post-partum rise of temperature.

The observations were made in one of the London lying-in hospitals, and are a valuable contribution to the literature of the subject. The paper provoked an animated discussion, in which the President, Drs. Mathews Duncan, Playfair, Graily Hewitt, Williams, Champneys, and others joined.

Dr. John Williams's paper on Corroding Ulcer of the Os Uteri, was deferred until the next meeting. The specimen, however, was exhibited, and by courtesy of Dr. Williams I saw the drawings which will be used for illustrations. It is to be hoped that this paper, emanating from so high an authority, will throw some light on the ætiology of this very obscure disease, which Emmet says "is almost as rarely met with as is true sarcoma."

The new antipyretic *kairin*, discovered last year by Fischer, of Munich, does not appear to be gaining favor, although I heard Heywood Smith say last week that he had used it with success in a case of high temperature after the removal of an ovarian cyst. Quinia had failed to bring down the temperature after repeated and large doses; but a few doses of kairin had the desired effect.

Since my last letter I have seen Sir Joseph Lister operate by his wiring method both on a fractured patella and on the olecranon. The cases did well. This method of wiring the fragments of bone together is, I believe, steadily gaining ground, although it is still stoutly opposed by the older surgeons.

Very truly yours, W. P. MANTON, M. D.

[1] The italics are mine.

Miscellany.

FATAL RESULT FROM INJECTION OF THE TUNICA VAGINALIS WITH IODINE.

DR. JOHN A. WYETH reports in the *Annals of Anatomy* (January, 1884) a case where death followed the medical treatment of hydrocele by injection of iodine. The patient was forty-three years of age, of good family history. Had had syphilis and gonorrhœa, the latter several times, but no symptoms of any unusual lesion for at least three years. The hydrocele on the left side was of three months' standing at the time of operation. The urine contained a trace of albumen and pus, supposed to be the *liquor puris*. In the operation, which was done June 27th, the method advised by Van Buren and Keyes was followed. The fluid, measuring about eight ounces, was drawn off with a medium-sized aspirator needle, and one half the quantity of tincture of iodine was thrown in and immediately drawn back into the aspirator. A small quantity, estimated at about one half an ounce, would not return through the needle, and was allowed to remain in and to trickle out through the trocar wound.

Pallor and other evidences of slight shock followed the operation, which was done at ten A. M. At four P. M. patient had a chill lasting fifteen minutes, followed by delirium and a rapid pulse scarcely perceptible at the wrist. Half an ounce of whiskey was given *per os*. By this time a dark-blue spot, insensible to the touch and as large as a silver dollar, had made its appearance on the scrotum, extending to the median raphé. A free incision was now made into the tunica vaginalis through this spot, the cavity was washed out, and the scrotum covered with a poultice. The iodine which was left in was washed out, together with a few small brown clots, which seemed to be coagulated hydrocele fluid, stained with iodine. Urine passed six hours after operation was colored with iodine, and the breath had a peculiar odor. Temperature on this day was, at 3.40 P. M., 101° F.; 4.20 P. M., 102° F.; eight P. M., 99.8° F.; ten P. M., 99.7° F. Quantity of urine in first twenty-four hours, ℥xv.

June 28th. Temperature from one to eleven A. M., 99° F. At two A. M. passed ℥v. dark urine. Slight vomiting, and again at nine A. M., after taking milk. Cellulitis of scrotum, penis, and contiguous skin of abdomen. One P. M., temperature 101° F.; four P. M., temperature 102° F.; urine, ℥ixss.

The next few days sloughing of the scrotum occurred, poultices were applied, and the patient was in general comfortable with temperature never above 101° F. The urine averaged about twelve ounces.

On July 4th patient was seized with a severe diar-

rhœa, followed by eleven evacuations, which greatly prostrated him before they could be checked with quinine, bismuth, and opium; urine, ℥xv.

The next day, at six A. M., while attempting to sit up in bed and lift himself by his hands, he cried out as if in great pain, and fell back instantly dead. An autopsy was refused.

The immediate cause of death was believed by the author to be severe diarrhœa, which, supervening on the bad condition of the man, caused heart failure. The absorption of the iodine was the entering wedge, which was followed by the other accidents. Uræmia is excluded, from the amount of the urine and the sufficiency of urea. The author's conclusion is that the open operation, that is, free incision, with stitching of the parietal layer of the tunic to the integument, and the introduction of a drainage tube into the cavity, is the safest and surest operation.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 26, 1884.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,206,590	592	220	12.75	23.12	.34	4.59	1.53
Philadelphia	846,984	446	162	16.35	12.09	3.14	5.82	5.60
Brooklyn	566,689	237	89	13.86	19.32	.42	5.46	2.10
Chicago	503,304	195	92	23.97	16.83	5.61	6.63	4.08
Boston	362,535	160	40	17.64	18.27	1.89	5.67	3.78
St. Louis	350,522	152	49	13.86	21.12	.66	6.60	1.32
Baltimore	332,190	172	76	22.04	16.24	2.32	6.84	1.16
Cincinnati	255,708	113	37	7.78	20.24	5.28	.88	—
New Orleans	216,140	165	35	21.82	9.09	3.64	1.21	.61
District of Columbia	177,638	79	—	17.52	14.08	—	5.16	2.64
Pittsburg (1883)	175,000	52	22	17.28	9.60	3.84	7.68	5.76
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	47	28	8.52	—	2.13	6.39	—
Providence (1883)	116,755	37	—	8.11	—	—	5.41	2.70
New Haven (1883)	73,000	23	6	13.05	21.75	—	4.35	—
Charleston	49,999	37	9	8.10	16.20	2.70	5.40	—
Nashville	43,461	21	3	13.28	9.52	—	—	—
Lowell	59,485	27	10	29.60	11.10	3.70	11.10	3.70
Worcester	58,295	21	11	33.33	19.04	—	4.76	4.76
Cambridge	52,740	22	9	18.22	13.66	—	4.55	4.55
Fall River	49,006	20	8	—	35.00	—	—	—
Lawrence	39,178	12	5	33.33	8.33	—	16.66	8.33
Lynn	38,284	17	6	11.66	5.88	—	11.66	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	10	2	—	—	—	—	—
[1] New Bedford	26,875	10	3	10.00	30.00	—	10.00	—
Somerville	24,985	14	3	14.28	21.42	—	14.28	—
Holyoke	21,851	10	—	30.00	50.00	—	20.00	—
Chelsea	21,785	6	3	33.33	16.66	—	16.66	—
Taunton	21,213	7	0	—	—	—	—	—
Gloucester	19,329	4	1	—	—	—	—	—
Haverhill	18,475	8	1	—	12.50	—	—	—
Newton	16,995	5	1	—	—	—	—	—
Brockton	13,608	4	0	—	25.00	—	—	—
Newburyport	13,537	7	1	—	—	—	—	—
Fitchburg	12,405	2	1	—	—	—	—	—
Malden	12,017	3	1	—	33.33	—	—	—
Eighty-five Massachusetts towns	310,018	82	21	3.69	—	3.69	—	—

[1] Twenty cases recorded at New Bedford drowned at Gay Head.

Deaths reported 2822 (no report from Buffalo): under five years of age, 978: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 424, lung diseases 460, consumption 396, diphtheria and croup 146, scarlet fever 80, typhoid fever 50, diarrhœal diseases 37, measles 33, malarial fevers 28, whooping-cough 20, small-pox 17, cerebro-spinal meningitis 17, puerperal fever 14, erysipelas 11, typhus fever one. From *diarrhœal diseases*, New York 11, New Orleans eight, Brooklyn five, Boston three, St. Louis, Baltimore, and Cincinnati two each, Chicago, Nashville, Cambridge, and Holyoke one each. From *measles*, Baltimore 11, New York seven, Brooklyn and District of Columbia five each, Philadelphia two, Chicago, Nashville, and Worcester one each. From *malarial fever*, New York and New Orleans six each, Chicago five, Brooklyn four, St. Louis three, Baltimore, two, District of Columbia and New Haven one each. From *whooping-cough*, New York four, Baltimore and District of Columbia three each, Brooklyn two, Chicago, Boston, St. Louis, Cincinnati, New Orleans, Nashville, Worcester, and Chelsea one each. From *small-pox*, New Orleans 16, Philadelphia one. From *cerebro-spinal meningitis*, New York six, Philadelphia and Worcester three each, Chicago, New Orleans, New Haven, Cambridge, and Somerville one each. From *puerperal fever*, Boston five, Chicago three, Brooklyn two, Philadelphia, St. Louis, Cincinnati, and Lowell one each. From *erysipelas*, New York, Chicago, and Lowell two each, Philadelphia, Brooklyn, Boston, St. Louis, and Baltimore one each. From *typhus fever*, New York one.

Eight cases of small-pox were reported in St. Louis, Cincinnati one; scarlet fever 59, diphtheria 29, and typhoid fever seven in Boston.

In 105 cities and towns of Massachusetts, with an estimated population of 1,319,006 (estimated population of the State 1,922,530), the total death-rate for the week was 17.78 against 20.00 and 18.00 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending January 12th, the death-rate was 21. Deaths reported 3523: acute dis-

eases of the respiratory organs (London) 379, scarlet fever 117 measles 116, whooping-cough 99, fevers 51, diphtheria 32, diarrhœa 29, small-pox (Birmingham seven, London and Sunderland two each, Liverpool one) 12. The death-rates ranged from 13.7 in Portsmouth to 28.9 in Norwich; Bristol 17.2; London 91.4; Birmingham 20.2; Sunderland 20.8; Nottingham 21.1; Bradford 21 4; Newcastle-on-Tyne 22.8; Liverpool 23.7; Sheffield 25.5; Manchester 28.4. In Edinburgh 18.8; Glasgow 25.8; Dublin 27.1.

For the week ending January 12th, in the Swiss towns, there were 36 deaths from consumption, lung diseases 22, diphtheria and croup 11, diarrhœal diseases 10, whooping cough six, measles three, scarlet fever three, typhoid fever two, small-pox one, erysipelas one. The death-rates were, at Geneva 19.4; Zurich 5.9; Basle 20.9; Berne 23.3.

The meteorological record for the week ending January 26th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date. Jan., 1884.	Barometer. Daily Mean.	Thermometer. Daily Mean.	Thermometer. Maximum.	Thermometer. Minimum.	Relative Humidity. 7.23 A. M.	Relative Humidity. 3.23 P. M.	Relative Humidity. 11.23 P. M.	Relative Humidity. Daily Mean.	Direction of Wind. 7.23 A. M.	Direction of Wind. 3.23 P. M.	Direction of Wind. 11.23 P. M.	Velocity of Wind. 7.23 A. M.	Velocity of Wind. 3.23 P. M.	Velocity of Wind. 11.23 P. M.	State of Weather.[1] 7.23 A. M.	State of Weather.[1] 3.23 P. M.	State of Weather.[1] 11.23 P. M.	Rainfall. Duration. Hrs. & Min.	Rainfall. Amount in inches.
Sun., 20	30.097	13	21	10	80	100	94	91	NW	N	NW	13	11	6	S	S	C	—	—
Mon., 21	30.256	13	23	5	63	64	80	69	NW	W	W	7	11	7	C	C	C	—	—
Tues., 22	30.135	26	34	10	60	48	72	60	SW	SW	SW	14	15	11	C	C	H	—	—
Wed., 23	30.139	36	44	29	67	85	82	78	SW	SW	S	8	7	7	C	O	F	—	—
Thurs., 24	29.994	34	42	31	78	95	100	91	SW	NE	NW	4	7	6	O	R	R	—	—
Fri., 25	30.325	22	36	18	64	73	91	76	NW	NW	NW	17	8	10	O	O	S	—	—
Sat., 26	30.545	17	27	10	61	63	83	69	NW	NW	NW	16	15	9	C	C	C	—	—
Mean, the Week.	30.213	23	32	5				76										45.15	.98

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM JANUARY 25, 1884, TO FEBRUARY 1, 1884.

ALEXANDER, CHARLES T., major and surgeon. So much of paragraph 7, S. O. 211, September 14, 1883, as directs him to report in person to the commanding general, Department of the Missouri, for duty, is revoked, and he will, upon the expiration of his present leave of absence, proceed to St. Louis, Mo., and assume duty as attending surgeon and examiner of recruits in that city. Paragraph 1, S. O. 21, A. G. O., January 25, 1884.

ELBREY, FREDERICK W., captain and assistant surgeon. Present leave of absence extended six months. Paragraph 9, S. O. 24, A. G. O., January 25, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING FEBRUARY 2, 1884.

BATTLE, S. W., passed assistant surgeon. Detached from the U. S. S. Gedney and placed on sick leave.

CORRECTION.

MR. EDITOR, — I ought to have stated in my article on Nephrectomy, which you published January 24th, that the form of table was taken from an article by Mr. Barker, in Vols. LXIII. and LXIV. of the Medico-Chirurgical Transactions, and that cases numbered 1, 3, 4, 6, 7, and 14 were found in his table.

Very sincerely yours, JOHN HOMANS.

OBITUARY.

JOHN L. CLARK, M. D., fifty-five years of age, a ward master in the Boston City Hospital, died recently in that institution of pneumonia. The deceased was a well-educated man, and was graduated at the Harvard Medical School in the class of 1861, with Drs. Blake and Edes, now visiting physicians to the City Hospital. He served in the Union Army as an assistant surgeon until the war was over. He then practiced medicine for a time in Providence, R. I., but subsequently suffered pecuniary misfortune. Previous to his entering the service at the City Hospital he was steward at the Massachusetts General Hospital.

APPOINTMENTS. — Dr. Charles M. Green has been appointed assistant in obstetrics in the Harvard Medical School.

Mr. Charles F. Donnelly has been again appointed by the Governor on the Massachusetts Board of Health, Lunacy, and Charity to fill the vacancy caused by the resignation of Dr. Robert T. Davis, M. C.

DEATH. DR. JOSHUA JEWETT JOHNSON. — Died, in Northborough, Mass., January 29, 1884, Joshua Jewett Johnson, M. D., M. M. S. S., aged seventy-four years nine months.

BOOKS AND PAMPHLETS RECEIVED. — Hints on the Drainage and Sewerage of Dwellings. By William Paul Gerhard, Civil Engineer. New York: William T. Comstock, 6 Astor Place. 1884.

Report of Proceedings of the Illinois State Board of Health. Quarterly Meeting, Springfield, January 17, 18, 1884.

A Manual of Practical Hygiene. By Edmund A. Parks, M. D., F. R. S., late Professor of Military Hygiene in the Army Medical School, etc. Edited by F. S. B. François De Chaumont, M. D., F. R. S., Fellow of the Royal College of Surgeons of Edinburgh, Professor of Military Hygiene in the Army Medical School. Sixth Edition, with an Appendix giving the American Practice in Matters relating to Hygiene, prepared by and under the Supervision of Frederick N. Owen, Civil and Sanitary Engineer. Vol. II. New York: William Wood & Co. 1883. (November Number of Wood's Library of Standard Medical Authors.)

The Relation Dairy Products bear to Disease. By Hugh Hamilton, M. D., Harrisburg, Pa. (Reprint.) 1884.

Transactions of the American Gynecological Society. Vol. VIII. For the Year 1883. New York: D. Appleton & Co. 1884.

So-Called "Concussion of the Spine" in Railway Injuries. By John G. Johnson, M. D. New York.

Eighteenth Report of the Board of Trustees of the Connecticut Hospital for the Insane. 1884.

Morbid Somnolence. By Rudolph Matas, M. D. Read before the New Orleans Medical and Surgical Association.

Trismus Nascentium, or the Lockjaw of Infants: Its History, Cause, Prevention, and Cure, etc. By J. F. Hartigan, M. D., of Washington, D. C. (Reprint from American Journal of the Medical Sciences.)

Annual Address delivered before the American Academy of Medicine at New York, October 10, 1883. By Henry O. Marcy, A. M., M. D., President of the Academy.

Original Articles.

TWO CASES OF ABDOMINAL SECTION TO DISCOVER THE CAUSE OF INTESTINAL OBSTRUCTION.[1]

COLOTOMY BY THE MEDIAN INCISION IN ONE CASE, AND OPENING OF THE CÆCUM BY A LATERAL INCISION OF THE ABDOMINAL WALLS IN THE OTHER.

BY JOHN HOMANS, M. D.,
Surgeon to the Massachusetts General Hospital.

MRS. R., aged forty-three, who had recovered from ovariotomy in May, 1881, and had enjoyed fair health since her recovery, began to suffer from constipation in the autumn of 1881.

Her medical attendant, Dr. J. H. Richardson, of Medfield, Mass., wrote to me (I give his exact words) on December 15th, as follows: "I was called to see Mrs. R., whom you no doubt remember, last Sunday, December 11th, and found that she had had an increasing constipation for the last two months, the last dejection was December 6th, and there has been none since to amount to anything. She has been quite comfortable most of the time with the exception of colic pains occasionally. Pulse has been 80 to 84, her temperature 100° F. Treatment at first small repeated doses of castor oil, and later saline laxatives and a diet of gruel. No opiate has been required but once."

On the 16th Dr. Richardson writes: "I find Mrs. R. very comfortable. There is now no distention of the abdomen, flatus passes readily, and she does not look sick. I examined the rectum and found nothing. She has been able all the while to take injections of three pints or more and retain them for one or two hours, then they come away freely without color or odor. How long can this last without change of some kind?"

Again on the 17th Dr. Richardson writes: "Our patient, Mrs. R., continues very much the same. During the last twenty-four hours flatus passed much less readily, and there was more fullness of the bowels, but very little pain. She sleeps well, and is quite comfortable. Since the 8th inst. I do not think the amount of a teaspoonful of solid fæcal matter has passed the bowels."

On the 19th he writes: "For thirty-six hours no flatus has passed, and I found her this morning a little uncomfortable from the distention of the bowels. Last evening she took one eighth grain of morphia. I call the bowels a good deal distended to-day. Pulse 80, and normal. It seems to me there can hardly be any doubt about the case looking rather serious. She has shown no fever or alarm, and she thinks you are going to stand by her through this siege."

On the next day he writes: "I saw our patient this morning, and found that her stomach had not retained much given yesterday, and she looked a little worn. Pulse and temperature the same, the bowels apparently no more distended but more painful, and she had rejected the morphia powder last night. I gave this morning morphia subcutaneously and nutrient injections. I don't know as I have any reason to expect relief without surgical interference, and how long to wait is the question. It seems to me that to-morrow or next day at farthest, — perhaps to-morrow, — it would be desirable for you to see her."

I have given Dr. Richardson's letters as he wrote them because they convey a very clear idea of the state of the case during the two weeks preceding the operation. On December 21st I saw the patient at her home, and explained to her that an exploratory incision might reveal some band or adhesion resulting from the cicatrization following the removal of the ovarian tumor, and that this I might be able to divide or separate and completely relieve her, or that I might find the obstruction not removable and have to make an artificial anus. She was a woman of remarkable coolness, quietness, decision, and courage, and she said that she should like to prolong her life for the sake of her boy, and that she wished me to operate and do the best I could under the conditions I should find. At this time the abdomen was somewhat distended, but not hard, and the peristaltic movements of the bowels were active and very visible to the naked eye, looking as if the vermicular motion was a sort of vibration which moved to a certain point and then returned by a vibration in the opposite direction. This was continuous. The pain was severe, but not unbearable, and the countenance looked pale and worn.

The operation, in which I was assisted by Drs. J. W. Elliot, Russel Sturgis, and J. H. Richardson, lasted about an hour and a half. It was done under the carbolic spray. The abdomen was opened along the line of the former ovariotomy incision; there were some elastic adhesions between the bowels and the cicatrix; and many small round hard nodules (cancer) were felt scattered about in the peritonæum. By careful search I could find no band, nor any adhesion, but at length I found the point of obstruction to be in the descending colon just above the sigmoid flexure. It was a hard (cancerous) mass which filled the calibre of the bowel and produced a linear cicatricial looking stricture. It was impossible to excise this part of the bowel, for I could not drag it up above the pubes sufficiently to enable me to sew the divided ends of the intestine together (and, indeed, I did not feel hopeful enough of success to have attempted the excision even if I could have done it). Accordingly I asked Dr. Elliot to grasp the bowel firmly above the obstruction high enough to enable me to open it above the stricture and to sew it to the skin in order to make an artificial anus in the pubic region at the very lowest point of my incision just behind the bladder.

To Dr. Elliot's careful manipulation the success of the operation was largely due. After I had completed the attachment to the skin, I surrounded Dr. Elliot's hand with sponges and towels within the abdomen, and held the opening as much outside the abdominal cavity as I could. Dr. Elliot then released his grasp, and enormous quantities of semi-solid fæces of a yellow color, mixed with gas, ran out over everything, the patient, the table, the rubber sheet, and the floor. We all thought that some of this ran into the abdominal cavity, indeed we were pretty sure of it, but we did our best to prevent it. The abdominal wound was then sewed up and dressed antiseptically, but this was of no use, as the intestinal contents soon overflowed and soiled everything in the neighborhood. After several cleansings and washings there occurred a pause in the intestinal flow, and we placed the patient in bed. The dressings were changed four times in the next

[1] Read before the Surgical Section of the Suffolk District Medical Society, December 5, 1883.

twenty-four hours. At the last dressing the discharge was found to be mucous in character.

At 8.30 P. M. a subcutaneous injection of one eighth of a grain of morphia was given for pain, and the patient passed a very quiet night. Milk and liquid food were given in small quantities and retained. The discharge from the artificial anus continued to be colorless mucus of a very offensive odor for the second twenty-four hours, and no fæcal matter was seen. In a few days more she was eating solid food. The bowels gradually became pretty regular, moving sometimes twice and sometimes four times a day, and the discharges became fæcal and solid as in health. The temperature ranged between 99° F. and 101° F. for the first fortnight, and rose on the 5th of January, 1882, to 103° F. for the temperature and 115 for the pulse respectively, owing to a little pus in the wound. From this time her recovery was uninterrupted except by a slight attack of diarrhœa on January 22d. The nurse wrote on January 13th: "The patient sits up every day for four or five hours, and to-day she walked across the room twice with my assistance. The opening is very easily managed by putting in a plug of cotton, over that folded compresses, then a roller bandage tightly applied, and over all a tight swathe. When she goes to bed for the night it is dressed more loosely to allow the contents of the bowel to escape."

When she had entirely recovered and could take care of herself Dr. Codman fitted a hard-rubber pad with a movable joint to the artificial anus, and this kept the opening closed except when, as sometimes happened, there was diarrhœa. Mrs. R. enjoyed herself and was happy during the summer of 1882, but she never went about in society at all, as she found it impossible to control the discharge of flatus from the artificial opening. When I asked her if her physical condition made life a burden, she said, "Not at all; I am perfectly comfortable, and can accomplish all I want to. If you have any patient in the condition I was send her to me and I think I can convince her that I am much better off than before the operation, and except that I don't like to go among people, I suffer very little inconvenience."

As I have quoted largely from Dr. Richardson's letters, I will add that he told me that there was no trouble in the evacuation of the bowels from the beginning to the end, and that one could hardly believe that an artificial anus could make so little trouble. All this time, however, the different cancerous deposits in the abdomen were growing, and by the latter part of the autumn one mass reached from the site of the wound to the epigastrium. Mrs. R. gradually failed, and died October 10, 1882, ten months after the bowel had been opened.

There was no autopsy.

The second case of exploratory incision to ascertain the cause of intestinal obstruction occurred in the practice of Dr. A. H. Nichols, of this city. I give the history of the case previous to the operation in his words:—

"On the 1st of June, 1882, I was called to Mrs. T., and found her suffering from obstinate constipation of three weeks' standing, though she did not complain of any especial inconvenience arising from this suspended function. She was apprehensive, however, that this constipation might be an indication of intestinal cancer, a trouble said to be hereditary in her family. She was able to recall the history of three members of her family who had died from this disease, and she remembered that in two of these cases constipation was the first and prominent symptom. It was, furthermore, firmly impressed upon her mind that in these two cases there existed little or no suffering until the administration of powerful cathartics by the advice of the physician. She accordingly stipulated that no laxatives should be ordered in her own case. I saw no reason for sharing her forebodings, and attempted to relieve her constipation by means of frequent laxative enemata, which proved utterly inefficient, though some encouragement was derived from an insignificant dejection at the expiration of about a week, but with this exception no fæces whatsoever were voided. Until about the 22d of June the ordinary signs of intestinal obstruction — pain, nausea, retching, distention, tumor, quickened pulse, elevated temperature, etc., etc. — were all absent. The most that could be made out was a somewhat increased fullness of the bowels, more noticeable in the right iliac region. On the 23d of June this abdominal fullness had increased, but was not especially prominent at any one part, and during the following night she complained for the first time of colic, which was not severe enough to call for any opiate. During all this period she went to the table, and was allowed a limited quantity of simple nutritious food. After the consultation with Dr. John Homans on the 23d of June she was informed that there existed an intestinal obstruction which could not be relieved except by surgical interference, and she was fully warned of the danger and uncertainty attendant upon any such operation. This unfavorable announcement was received by her with fortitude and equanimity. She remarked calmly that her original prediction was verified, and after a brief reflection decided to submit without delay to the operation proposed (colotomy) rather than to wait for the supervention of any further complication. On the evening of the 23d she rode in an open carriage to my office, and proceeded thence to the private hospital selected for the operation."

The operation was done on the 25th of June, after seven weeks of complete obstruction of the bowels. The patient, a fleshy woman, looked worn and anxious, and was in great pain. The abdomen was much distended with gas. I may remark that the day was intensely hot, the thermometer registering, if I recollect right, 93° F. As Dr. Nichols thought there was an accumulation in the right iliac region, and as neither of us knew exactly where the obstruction was, I deemed it best to make an incision in the neighborhood of the right linea semilunaris. The operation was done under the carbolic spray, and with every antiseptic precaution. Encouraged by the result of the previous case I hoped for a favorable issue. My first incision was three inches long, and was made through the external oblique muscle, and just beyond the outer border of the rectus. Two branches of the epigastric artery were cut and bled freely; these were tied before the peritonæum was opened. When the peritonæum was divided great care was taken not to wound the omentum, which presented itself spread out over the small intestines. The omentum was pulled gently out of the wound and divided and tied because it was adherent below beyond the cæcum. If I separated it from its adhesions below the cæcum I feared that I could not control the hæmorrhage, and if I did not either separate it or divide it I could not get in my hand to explore the interior of the abdomen, conse

quently I tied it above and below, and divided it between the ligatures. The opening in the abdominal walls was, however, too small for manual exploration, and the incision was extended upwards. The bowels, large and small, were greatly distended with wind, and in some places were of a deep-red color, but had not lost their shining lustre. The exact seat of the stricture was hard to find out. I thought I felt a constriction in the descending colon in the left lumbar region, and as this was below the cæcum I determined to make an artificial anus in the cæcum. The abdominal cavity was, therefore, carefully sponged out, and an incision about three quarters of an inch long was made in the cæcum, and the edges of this opening were carefully stitched to the parietal peritonæum and to the skin. Great care was taken that none of the fæcal contents should enter the abdominal cavity. I placed nine soft sponges around the cæcum, and Dr. M. H. Richardson and F. B. Harrington succeeded perfectly in preventing the entrance of any fæces while I was passing the sutures. Much embarrassment was occasioned by the great distention of the coils of intestine, and it would have been better to have made the opening quickly without searching for the seat of the stricture; however as the obstruction might have been from a band or a twist it was natural that I should have sought for it. The operation was a long one (an hour and a half), and the weather was intensely hot. When the patient was placed in bed her pulse was rapid, but she was otherwise in fair condition. Wind and fæces came out through the opening in the cæcum. Hot bottles had been put at the patient's feet, and I left her in charge of Dr. Nichols. The following is his farther account of the case: —

"Directly after the operation a copious discharge of semi-liquid fæces set in. Upon coming out of the ether she complained of great pain, and was extremely restless. Her pulse soon showed signs of weakness, and she succumbed to the effects of general shock five hours after the conclusion of the operation, the severity of her suffering during the last two hours requiring a resort to ether.

"At the autopsy, made by Dr. W. P. Bolles, the same evening, there was found an annular cancer (scirrhus) in the descending colon, about eighteen inches from the orifice of the rectum, occluding the intestine so completely as to prevent the flow of even water. Below the stricture the intestine was completely empty. Above there was found small, scattered masses of fæces, but the great bulk of the contents had been expelled from the artificial opening. There existed no signs of inflammation of the intestine above the seat of the stricture."

It will be seen that the result in these two cases was different, but in both the operations adopted were logical and proper. In the second operation there was much more handling of the bowels than in the first, and it was very difficult to manage the insertion of the sutures and to keep the bowels from protruding between them or being wounded by the needles. I believe that Mr. Lawson Tait thinks it better surgery to open the bowel at any point you happen to strike (that is, to pull out the first loop that presents itself and open it) than to search for the obstruction. In our second case that mode of proceeding would have been the best. I present these two cases to the Society as a contribution to the study of the treatment of intestinal obstruction.

THE TREATMENT OF RETAINED SECUNDINES AFTER ABORTION.[1]

BY JOHN W. BRANNAN, A. B., M. D., OF COLORADO SPRINGS.

THE management of incomplete or imperfect abortion has excited renewed interest and discussion during the past year. The gynæcologist on the one hand and the general practitioner on the other have expressed their respective views with much warmth and earnestness of conviction. The gynæcologist insists upon the immediate removal of the retained membranes and placenta by manual or instrumental means; the general practitioner, while admitting fully the desirability of the complete emptying of the uterus, believes that this is nature's task, and that the physician should not interfere unless the symptoms are urgent. The former fears the present risk of hæmorrhage and the future risk of septicæmia; the latter fears inflammation as a result of uterine manipulation. Such is a brief statement of the points at issue between the disputants.

Let us suppose, for example, a case of abortion at the third month of pregnancy; the fœtus has come away, the secundines are retained, the cervix uteri is more or less contracted, the woman is comfortable, there is no hæmorrhage or offensive discharge. The gynæcologist would at once proceed to extract the membranes and placenta, using the finger, curette, or forceps, according to the state of the cervix; if the cervix is tightly closed, he would dilate it with tents or metallic dilators, and then extract as before. The more conservative general practitioner, however, would preserve an expectant attitude, contenting himself with giving full doses of ergot, and possibly tamponing the vagina; should alarming hæmorrhage or symptoms of septicæmia supervene he would then, but not before, feel called upon to empty the uterus in the manner described above.

On consulting the obstetrical literature of the last twenty-five years we find the same difference of opinion that now exists in the profession. The earlier writers of this period, however, are agreed in advising the expectant treatment of retained portions of the ovum. Tyler Smith[2] and Bedford[3] assert that in such cases there is not the same tendency to decomposition and its dangers that there is in the case of placenta at full term. Meigs[4] prefers to leave such occurrences in the hands of nature, and believes that there is no danger in so doing. Ramsbotham[5] relies upon the vaginal tampon and the use of ergot when the membranes cannot be reached with the fingers in the vagina. Hodge[6] says that "the extraction of the retained membranes certainly ought not to be attempted by manual or instrumental measures if there be little or no bleeding, especially as the os and cervix generally contract, and the membranes are closely adherent." Churchill[7] believes that we are not to interfere when the membranes are retained, unless there is hæmorrhage or evidence of irritative fever. He concludes as follows: "Larger experience has made me less fearful of leaving these cases to nature, and more unwilling

[1] Read before the El Paso County Medical Society, January 7, 1884.
[2] Lectures on Obstetrics, 1858.
[3] Principles and Practice of Obstetrics. 1863.
[4] Obstetrics, the Science and the Art, 1863.
[5] Principles and Practice of Obstetrical Surgery, 1865.
[6] A System of Obstetrics, 1866.
[7] Theory and Practice of Midwifery, 1866.

to interfere hastily." Leishman[1] advises us to preserve an expectant attitude if the membranes are retained, unless the hæmorrhage be alarming. In the latter case he tampons the vagina. While admitting the danger of blood-poisoning from a putrefying retained placenta, he adds that such poisoning is rare.

We now approach the period in which modern gynæcology has made its greatest advances, and its influence upon its kindred branch of medicine, obstetrics, is at once seen. The more a given writer is occupied with gynæcology and the less with the general practice of medicine the greater is his activity in interfering with the processes of nature. Barnes[2] says that the first indication is to "empty the uterus." If the os is open he at once removes the whole ovum with the finger, breaking up the decidua if necessary. If the os is closed he immediately dilates the cervix with laminaria tents, and then removes the membranes with the finger as before. He does not use ovum forceps. He condemns the vaginal tampon as "unscientific and illusory," claiming that it neither stops the hæmorrhage nor favors the dilatation of the cervix. Playfair[3] tampons the vagina and gives ergot in cases of alarming hæmorrhage or of undilated os uteri. If the os still remains closed he employs sponge tents for its dilatation, even though there be no urgent symptoms. He then removes the ovum with the finger. He admits, however, that "cases are frequently met with in which any forcible attempt at removal would be likely to prove very hurtful, and in which it is better practice to control hæmorrhage by the plug or sponge tent, and wait until the placenta is detached."

Prof. A. R. Simpson[4] blames the authors of our obstetric text-books for failing to state clearly how we can best secure complete evacuation of the uterus in cases of abortion. He advocates the use of a sponge tent, previously disinfected, as soon as the abortion appears unavoidable. He also gives ergotine hypodermically. When the cervical canal is dilated he removes the ovum from the uterus with the fingers. In order to render the uterine cavity accessible to the exploring finger he either pushes down the fundus uteri from above or drags down the cervix from below with vulsellum forceps. He deprecates the use of instruments for the detachment of retained portions of the ovum.

Schroeder[5] employs the tampon if the hæmorrhage is alarming or the ovum is retained. He claims that the tampon always checks the hæmorrhage, and as a general rule effects the expulsion of the ovum from the uterus. In case some portions of the ovum are still retained by a contracted os, he dilates the cervix with sponge or laminaria tents, and then empties the uterus with the fingers. If any placental fragments cannot be reached by the hand he employs forceps for their extraction.

Angus Macdonald[6] is more conservative than the four preceding writers. He says: "My opinion, therefore, is that in the ordinary run of cases, in which the hæmorrhage is not specially profuse, we ought to trust to ergot by the mouth, or ergotine subcutaneously, and that we shall most probably find that all will go on all right, except that we shall have to hurry the conclusion of the case with slight manipulation, and that wholesale imperfect plugging of the vagina is to be strongly deprecated." If, however, hæmorrhage is severe, or symptoms of septicæmia arise, he takes "active measures to empty the uterus *tuto, cito, et jucunde*." If the os is open he removes the uterine contents with the fingers. If the os is closed he introduces a sponge tent and leaves it in situ from two to four hours. He then clears out the uterus, as before, with the fingers. Macdonald opposes the use of abortion forceps for the removal of the membranes, and also considers it an unnecessary and dangerous procedure to drag down the cervix with a vulsellum, as recommended by Simpson.

Lusk[7] endeavors to empty the uterus as soon as possible. If the cervix is patent he removes the membranes from the uterus with the finger. If the cervix is closed he employs the tampon, giving it three trials, each tampon being left in the vagina for twelve hours. If, after the removal of the third tampon, the cervix is still undilated, he resorts to sponge tents. He prefers to use the tampon before the sponge tent, as the former stimulates the uterus to contract, and promotes the separation of the membranes, even when it fails to secure their discharge. Lusk fears the results of putrid decomposition of the retained placenta. At the same time he admits that "fatal results are rare, as decomposition is usually a late occurrence, setting in, as a rule, only after protective granulations have formed upon the uterine mucous membrane, and after the complete closure of the uterine sinuses.

T. Johnson Alloway,[8] of Montreal, agrees with Simpson in his criticism of text-books on obstetrics because in them "insufficient stress is laid upon the importance of removing at once a retained placenta after abortion." He himself advocates the immediate removal of the secundines with the curette, not the finger, either with or without previous dilatation of the cervix. He maintains that, as a rule, it is impossible to remove the membranes with the finger unless the uterus is forced down in the pelvis to a dangerous degree.

Dr. Mundé[9] gives it as his opinion that "the future safety of the patient demands that the secundines should be at once removed after expulsion of the fœtus in every case of abortion in which such removal can be accomplished without force sufficient to injure the woman." His manner of operating is as follows: If the cervical canal is sufficiently patulous he detaches and removes the placenta with the fingers of the right hand while crowding down the fundus uteri with the left hand. If, however, the abdominal walls are fat or tense, or if the cervix is not sufficiently open to admit the finger easily, he employs the curette and placental forceps for the detachment and removal of adherent portions of membrane. The uterus is then washed out with a two to five per cent. solution of carbolic acid, the water used being either very hot or very cold. If there is the slightest suspicion of septic infection he swabs out the uterine cavity with pure tincture of iodine. Should the cervical canal be too narrow to admit even the curette it is at once dilated by the tupelo tent. Mundé prefers the tupelo to the

[1] System of Midwifery, 1875.
[2] Obstetric Operations, 1874.
[3] Treatise on the Science and Practice of Midwifery, 1876.
[4] Obstetrical Journal of Great Britain and Ireland, 1876, page 179.
[5] Lehrbuch der Geburtshülfe, 1877, p. 456.
[6] Obstetrical Journal of Great Britain and Ireland, 1880, page 313.
[7] The Science and Art of Midwifery, 1882.
[8] American Journal of Obstetrics, February, 1883.
[9] Ibid.

sponge because, although he himself has never met with an accident from sponge tents, he is "afraid to incur the risk of adding another to the *many examples of septic infection from that agent.*" (Italics mine.)

Mundé asserts that all this manipulation is so free from danger that every physician can employ it, and that the risk possibly incurred from letting the secundines alone is greater than that from their forcible removal. He gives a table of cases seen by him, in which he removed the secundines fifty-seven times by fingers and curette with but one fatal result. The length of time of retention of placenta was less than one day in eighteen, one day to one week in thirty-three, one week to two months in six, cases.

Dr. W. H. Farr [1] is in favor of the immediate removal of the membranes after abortion. He employs the curette forceps, and opposes the use of the finger as being dangerous. He writes: "I have one case in mind in which a physician of experience removed by the finger the retained product of abortion. The woman said the pain he caused was agonizing, and she was left the victim of prolapse of the uterus and a long train of nervous manifestations." Farr also refers to the dangers incident to dilatation of the cervix.

Dr. Walter Coles,[2] of St. Louis, opposes the immediate removal of the membranes as a matter of routine in every case of abortion. He believes that each case should be treated according to its indications. If the immediate symptoms are urgent the placenta should be at once removed by the finger, forceps, or curette, the cervix having been previously dilated if necessary. If there are no urgent symptoms the expectant plan should be pursued. It is his opinion that inflammation, the result of rough manipulation of the uterus, is much more to be feared than either hæmorrhage or septicæmia. Dr. Coles's paper was read before the St. Louis Obstetrical and Gynæcological Society. A general discussion followed, and it was evidently the sense of the Society that the expectant plan is safer than the immediate removal of the secundines by manual or instrumental means.

From the foregoing extracts it is seen that dilatation of the closed cervix with tents and extraction of the secundines with the finger or forceps is the usual method of procedure of those who advocate the immediate removal of retained portions of the ovum. Mundé claims that this manipulation is so free from danger that every physician can employ it. If this be true it is a strong argument in favor of active interference.

Dilatation of the cervix uteri with tents is the first step in this manipulation. Thomas [3] writes as follows with regard to this operation: "There is always danger in dilating the cervix by tents, though it is by no means so great as to make one hesitate in employing them, for the cases which demand them are often urgent ones, and they serve a purpose not attainable by any other means. It is much to be regretted that practitioners have not shown more alacrity in publishing unfortunate results from the use of this method of exploration and treatment. Had all the fatal cases which have resulted from accidents due to tents been faithfully recorded the list would now be a long one, and it would be greatly lengthened by a record of all the instances in which tedious, exhausting, and dangerous disease has thus been excited. . . . In my own practice I have met with four fatal cases resulting from the use of tents. Besides these I have seen, as every other gynæcologist has who has employed this means to any extent, a number of cases in which the following affections have been excited by them: pelvic peritonitis, peri-uterine cellulitis, septicæmia, endometritis, and hæmatocele. This is the record of my own practice, and my observation of that of many of my friends whose results I have an opportunity of seeing exactly agrees with it. Dr. Braxton Hicks says: 'I have seen a case end fatally where there had been dilatation a week previous, mental shock suddenly lighting up the inflammation and extending it to the peritonæum.'" Mundé himself fears sponge tents because of the many examples of septic infection due to them. He therefore uses tupelo, the newest material for tents in favor with gynæcologists. Fritsch,[4] however, asserts that "laminaria and tupelo will disappear just as sponge tents have vanished." He criticises severely the routine dilatation of the cervix uteri that is now so general among gynæcologists, and says that he himself has given up tents altogether, and has no cause to regret it.

It appears, then, that the first part of Mundé's manipulation is attended with danger. Let us now consider the extraction of the membranes by the finger, curette, or forceps. Barnes, Playfair, Simpson, and Lusk of the advocates of active interference deprecate the use of the curette or forceps as being hazardous. They employ the finger, and consider it safe and satisfactory. Alloway and Farr, on the other hand, regard the use of the finger as highly dangerous, and claim that the curette gives better results. We thus have testimony from the gynæcologists themselves that the forcible extraction of the secundines, whether manual or instrumental, is not free from danger.

Having shown that active interference in imperfect abortion is a dangerous procedure, we have now to inquire into the necessity of the operation. If the placenta does not soon follow the fœtus or is not forcibly removed what happens in the majority of cases? Published statistics on this point would be valuable and interesting, but, unfortunately, there are none. We must rely upon our individual experiences for an answer to this question. I think that practicing physicians will bear me out in the assertion that the great majority of these cases take care of themselves or at least require but little assistance from us. The placenta comes away in the next twenty-four hours, or within a few days, or at the next menstrual period. By far the larger proportion of abortions, as of deliveries at term, fall to the care of the general practitioner, the family physician; only a very small percentage reach the gynæcologist in the first instance. The latter sees the exceptional cases, the cases which have resulted badly, and therefore seek his special skill.

As illustrations of the course ordinarily taken by those abortions in which the ovum is not expelled entire I shall here give brief notes of three cases which have occurred in my practice: —

Case I. March 11, 1880. Mrs. O., multipara, aged thirty-two years. Catamenia ceased three months ago. Shifting pains in back and hips for last three days; slight flowing yesterday, increased to-day; uterine pains for several hours. A ten weeks' fœtus found lying in

[1] American Journal of Obstetrics, September, 1883.
[2] St. Louis Courier of Medicine, August, 1883.
[3] Practical Treatise on the Diseases of Women, 1880.
[4] American Journal of Obstetrics, February, 1883.

vagina and removed. Placenta could be felt within internal os. No hæmorrhage or discharge. Pulse 120; temperature 102° F. Treatment, one drachm of extr. ergot. fl. and one sixth grain morph. sulph. subcutaneously.

March 12th, A. M. No change in placenta. Pulse 72; temperature 98° F. Ergot and morphia as yesterday. P. M. Placenta still felt within os; hæmorrhage slight. Pulse 96; temperature 99.5° F. Swept my finger once around the circumference of the internal os, between it and the placenta, otherwise no manual interference. Ergot and morphia continued.

March 13th, A. M. Was told that placenta had come away twenty minutes after my visit of preceding evening. Pulse 90; temperature 98.5° F. Patient made rapid recovery.

CASE II. July 25, 1883, six A. M. Mrs. M., multipara, aged twenty-six, four months advanced in pregnancy. Occasional pains in back for last two weeks, with considerable flowing. Lost much blood yesterday, and early this morning a solid mass came away. A four months' fœtus, somewhat macerated, found in the basin. No placental fragments. Examination showed the placenta to be still within the uterus, the os being closed firmly around the umbilical cord. No hæmorrhage. Temperature and pulse normal. Twenty minims of laudanum and one drachm of ergot given. At ten A. M. vagina carefully tamponed with wads of cotton soaked in glycerine. Ergot repeated. Six P. M. Tampon removed and vagina washed with two and a half per cent. solution of carbolic acid. No change in state of cervix. Ergot and laudanum repeated.

July 26th. No change. Tampon again used, removed in evening. Ergot and laudanum continued.

July 27th. No change. Tampon omitted. Ergot and laudanum continued. Vaginal injections of two and a half per cent. solution of carbolic acid to be given twice daily.

July 28th. No change. Medicines omitted.

July 29th, P. M. Placenta expelled entire, no offensive odor whatever to it. Rapid recovery.

CASE III. August 20, 1883. Mrs. W., multipara, aged forty-seven years. Sufferer from repeated abortions since twenty years of age. Menses ceased ten weeks ago, patient supposing that she had reached the climacteric. Has not felt well for a week. Yesterday had pain in back, and slight flowing. This morning severe bearing down pains, and passed large amount of clots, together with fœtus and after-birth in fragments. Patient thinks that everything has come away. Nothing found on examination except a hard cervix fissured in various directions, with os tightly closed. Uterus appeared to be about normal in size. Fifteen minims of laudanum and one drachm of ergot given twice daily and carbolized vaginal injections. Nothing of note occurred in the case until August 22d, two days after the abortion, when at my usual visit I was shown a fragment of placenta, about one and a half inches in diameter, which the patient said had been expelled that morning. The mass had scarcely any perceptible odor. From this time on the patient progressed rapidly to perfect recovery.

The above cases caused me no little anxiety at the time of their occurrence. Their fortunate termination, however, would warrant me, I think, in pursuing the same course in similar cases in the future.

We know and may admit freely that the retained placenta does occasionally give rise to hæmorrhage or to symptoms of septicæmia. Mundé's own cases, however, show that forcible removal can even then be effected with good results. In fifty-four of his fifty-seven reported cases the placenta had been retained for a period varying from a few hours to two months. And yet recovery of the patient followed the removal of the placenta in all but one of these cases. On this point Muratoff,[1] of Moscow, who employs Sims's uterine dilators in all cases of neglected abortion, expresses himself as follows: "The presence of inflammation in the uterus or in its vicinity does not contraindicate the use of metallic dilators; on the contrary, it vitally indicates instrumental dilatation. In the great majority of my cases, dilatation, with subsequent emptying of the womb, was immediately followed by a marked improvement both of the local and of the general conditions; the patient's temperature steadily and quickly fell to the normal level, rigors and pain disappeared, the uterine discharge rapidly lost its offensive odor, and the uterus underwent uninterrupted involution." Muratoff, after dilating the cervix, does not at once introduce the curette or forceps or the hand into the uterus. He first tries bimanual expression of the uterine contents. Should this fail, the membranes are removed by one or two fingers. Besides Mundé's cases, I have collected thirty-two other published cases of forcible removal of long-retained placenta (one retained for 115 days, another for six months), and in all of them the patient recovered. We thus have a total of eighty-six cases, with but one death. Would the fatality be as small if physicians, however lacking in technical skill, were to proceed to dilate and extract in every case of abortion as soon as the placenta showed a tendency to delay?

Having argued to prove that active interference in abortion is as a rule unnecessary and dangerous, it follows that I agree with those who favor the expectant plan of treatment. This does not mean, however, that abortions should be "neglected," as the gynæcologists express it.

The following outline of treatment would seem to me judicious, and as answering all the indications in a case of abortion in which the secundines are retained after the expulsion of the fœtus: If the membranes are lying loose in the open cervix, they should be removed by the finger. If, however, they are still within the cavity of the uterus, no attempt should be made to remove them, whether the cervix be open or closed. Full doses of ergot should be given, and the vagina should be carefully tamponed. The ergot and tampon will check whatever hæmorrhage there may be, and will also serve to excite the uterus to contract and thus effect the separation of the membranes. Two or three tampons may be used, each being le ftin situ about twelve hours. The vagina should be well washed with a two and a half per cent. solution of carbolic acid at each removal of the tampon. If the membranes still remain within the uterus, and there be no hæmorrhage or evidence of blood-poisoning, we may leave the case to nature, merely continuing the ergot and carbolized vaginal injections for a few days. Besides enjoining the rest usual after all abortions, the physician should keep the patient under observation for a few weeks, if possible. If at any time serious and repeated hæmorrhages should occur, or symptoms of septicæmia should manifest themselves, these steps should be taken to

[1] London Medical Record. The Medical Gazette, December 1, 1883.

empty the uterus at once. If the cervix is patulous, bimanual expression of the placental remains should be tried. If this fails, the fragments may sometimes be brought away by intra-uterine injections. Last of all, we may resort to the use of the finger or the curette and forceps. If the cervix is closed, it should be dilated with the tupelo tent or Sims's dilators, and the uterine contents then removed as before.

Therapeutic Memoranda.

AN OVERDOSE OF CHLORAL.

BY JOHN P. REYNOLDS, M. D.

To a young and healthy patient in third labor, with a good presentation of the head, I gave, as I supposed, three times, at intervals of fifteen minutes, a dose containing fifteen grains of chloral. I had no better motive for its administration than the hope of comforting the patient, who was making moderate complaint. I shortly discovered that in forty-five minutes I had given her a hundred grains, and for the hour and a half which ensued I watched her condition with no little uneasiness.

She grew drowsy and heavy. The progress of the labor gave her no farther concern. If addressed, she could be roused to make answer, but soon fell off again. The pains became slow and ineffective. The pulse was at between sixty and seventy, full and laboring. Her hands, held by her husband looked almost black under his pressure. Fifteen minutes after the third dose of chloral I ruptured the membranes; and twenty-five minutes later, not quite two hours from the first appearance of pain, a male child was slowly extruded into the world. The surface of the child was excessively pale, and from head to foot it was besmeared with meconium. After very moderate efforts, however, it began to breathe and cry; but it did not for several hours regain its natural color. The placenta was soon expelled, though without any portion of the membranes. One drachm of fluid extract of ergot was twice given, and a half ounce of brandy. An hour after the birth the mother was in fairly good condition, and both she and thec hild made a safe recovery.

If now I add, that it would be hard to name husband and wife more widely known in the community where this occurred, or more deservedly admired and honored, I may emphasize for some readers the story of personal distress.

— The *Edinburgh Medical Journal* highly recommends for the ordinary eczema of the head in children, so commonly met with in dispensary practice, after two or three thorough cleansings, the daily application of the following salve: —

℞ Acid. salicylic. . . . . gr. x.
Tinct. benz. . . . . ℥xx.
Vaselini . . . . . ℥i.
M. ft. ung.

On other parts where a soft, easily melting salve such as this is not suitable, or where a firm dressing or a drying effect is desired, the following paste should be rubbed on: —

℞ Acid. salicylic. . . . . gr. xix.
Vaselini . . . . . ℥i.
Zinci oxidi, amyli . . . . . aa. ℥ss.
M. leniter terens, fiat pasta.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

IN MEMORIAM. — DR. CALVIN ELLIS.

January 9, 1884. The meeting was called to order at eight o'clock, Dr. R. T. Edes in the chair. A summary of the proceedings of the last meeting was given by the Secretary.

Upon motion of Dr. George B. Shattuck the business of this meeting was suspended as a token of respect to the memory of the late Dr. Calvin Ellis, formerly President of the Suffolk District Medical Society.

Dr. Edes, in announcing the result of the motion, made some very appropriate remarks relating to his early acquaintance with, and life-long esteem for, Dr. Ellis, a man whose character would long be a living influence in the medical element of Boston. Dr. Edes then called upon Dr. George C. Shattuck, who spoke as follows: —

Dr. Shattuck said that he could not refuse an invitation to say a few words at this time, and to bear his testimony to the worth and excellence of our late associate, Dr. Calvin Ellis. It certainly is well for us survivors, after the departure of a highly esteemed associate, to meet together and put on record our appreciation of worth and skill and our sense of loss. Excellence and distinction in our profession are the result of original endowment, of industry in training faculties, in acquiring knowledge, and of fidelity and skill in the discharge of duties. A medical man must devote years to preliminary education, and then must be constantly studying and training his powers of observation and reasoning, as well as adding to his stores of knowledge. There are those here who were associated with Dr. Ellis in his early years and will tell us of the qualities for which he was remarkable as a young man and a student. I became associated with him when he had already acquired reputation as a teacher and practitioner, and was looked upon as on the sure road to distinction. I noticed, and admired, his knowledge and skill as the pathologist of the Massachusetts General Hospital and instructor in clinical medicine in the Medical School. His ability, knowledge, and fidelity were recognized by professors and students. He was evidently the coming man in his department. And yet he worked patiently in subordination, was always kindly and courteous, and ready to carry out the plans of those who had the direction of affairs. When his predecessor in accordance with his own wishes and ideas of duty retired, Dr. Ellis was chosen professor of clinical medicine and visiting physician of the hospital, without any solicitation on his own part or from his friends, but because those who had the appointing power recognized that he was the fittest man to discharge the duties. The wisdom of the appointment was shown by many years of successful work. And when obliged by painful illness to retire from work, those who appointed him, those who worked with him, and those for whom he worked, preferred to wait for three years in the hope that his health and strength might be renewed so that the same skilled labor might still be at the service of medical science and instruction.

These hopes have been disappointed. He who knows what is best for each and all of us has removed him. We must acquiesce in this decision, whilst we may cherish the example of conscientious devotion to duty, of scrupulous regard to the rights and feelings of associates, of self-sacrifice in ministering to the sick and the poor, and in efforts to teach the young and the ignorant. May we all be able to profit by his example, so that when to each of us the summons to depart comes, the plaudit, "Well done good and faithful servant," may be on the lips of our survivors.

The Secretary then read the following letter from Dr. HENRY I. BOWDITCH: —

January 9, 1884.

To the Secretary of the Section of Clinical Medicine of the Suffolk District Medical Society: —

DEAR DR. BLODGETT, — I am very sorry that I am at present confined to the house, and shall therefore be unable to be at the "Memorial Meeting" which is to be held by the Clinical Section of the Suffolk District Medical Society at its first meeting after the death of our friend, Dr. Calvin Ellis. The Section, in which he so long labored, acts most appropriately in proposing to have this "Memorial Meeting."

Dr. Ellis has just died, after a long and distressing illness, which he bore without complaint and with a manly fortitude, while, however, looking forward hopefully, as was his nature, to its ultimate result, because it was non-malignant.

He was my pupil in his days of medical study, my assistant at the Massachusetts General Hospital, and afterwards my successor there, and also in the Professorship of Clinical Medicine at Harvard University; and, finally, he was always a most beloved friend. For many years past I have often sought his advice, and no one that I met gave wiser counsel than he did; for his words were uttered only after a most rigid examination of the matter in hand. To me his loss is simply irreparable; for no one can fill another's place.

But I do not write this in order to praise him or to mourn for his loss. His own life is his highest praise; and the termination of the earthly career of a really noble soul has not a particle of sorrow connected with it, which is not far outweighed by a kind of satisfaction, not to say joy. The beauty of Dr. Ellis's everyday life from the cradle to the grave seems well rounded out by his serene, uncomplaining death. If with this death we remember the years of almost hopeless and severe suffering so sweetly borne by our friend, then Death has no horrors, but comes rather as an angel of divine mercy to the relief of suffering humanity.

If by his intellectual acts a man has left, as Dr. Ellis has surely done, his impress for good upon hundreds who have either sought his instruction, or have met him in the daily walks of life, then the natural sorrow which we must feel for his loss is wonderfully mitigated; and he becomes forthwith a silent, but not less effective, exemplar, to all who knew, loved, and respected him. And where is there one who intimately knew Dr. Ellis who did not love and respect him?

Since his death I have been led to inquire into the antecedents of his family and of himself before we became personally acquainted, and I have been interested and instructed to find how many of his more striking moral and intellectual traits he owes to heredity. I shall give, of course, only a glimpse of the facts, because my purpose, on the present occasion, requires nothing more.

Two hundred years ago, or thereabouts, his earliest progenitor in this country came here from the ranks of the hard-handed independent-souled yeomanry of England. He settled in Dedham, Mass., and there tilled his acres and reared his family. A home on the site still stands, and it is occupied, as it has always been, by one of the same stock and name. Calvin Ellis, our deceased associate, was the seventh descendant from this first settler. It would seem that as the generations have passed along, work, solid work, and a belief in the real excellence and nobility of work, has been ever a prominent trait among all his ancestry. But there was with it also a love of culture, so far as that was possible in the earlier times. The Ellis family has given clergymen, physicians, lawyers, and energetic merchants and many honorable and excellent men and women to the world. His grandfather brought up a family of eleven children, and, aided by the thrift and economy of his wife in her wise management of his household, left as the net result of their joint lives $30,000 for their heirs! Surely here was a trait of energy, physical and intellectual, worthy of commendation. This same grandsire believed so strongly in work that he had a contempt for the bare idea of a man's having "nothing to do." His favorite expression was, "I would rather my son should throw stones from one heap to another, and then throw them all back again, than have 'nothing to do.'"

Again, fully believing in the excellence of the intellectual, as well as the physical training of any youth, he had his youngest son prepared to enter Harvard.

Unfortunately, as the story goes, the youth was by his brothers fairly laughed out of trying a college life.

Dr. Ellis's parents moved into Boston before his birth, and the father, Luther Ellis, became an energetic and successful iron merchant. Retiring from active business with a property ample for his wants, he had his son Calvin, our associate, educated for Harvard. Both parents have left loving memories of themselves in the hearts of their children, and of others. Their home, as the story comes to me, was one of those delightful places where parents and children mutually loved and respected and helped one another.

Religion, too, was taught in and governed it. The boys and girls went in their earlier days regularly to church. They were not governed by tales of terror as to the future, but were led to honorable thought and action rather by the examples of loving kindness and of independence of thought given to them by their parents.

They were styled Unitarians, a term of obloquy formerly, less so of late, since science has tended to break down sectarianism, that stronghold of the devil. The mother who presided over the domestic affairs had a gentleness and firmness of purpose, combined with a bright, contented, and self-sacrificing spirit. Her example proved to the children the lovableness of these qualities. The father, after long suffering borne with exemplary patience, died during the first year of Dr. Ellis's college life. Thus we see that while receiving from his earliest ancestors the fine manly traits of love of work and of liberality and independence of thought, with a desire for culture of the intellect, so far as was possible, his parents left him also a legacy of sweet and winning traits, that shone so conspicuously, during all the years of our friend's life.

As a boy he was of a quiet character, less boisterous than most boys of this age. He was, however, intel-

ligent and bright, and a favorite with all who knew him. His college life was uneventful. He was an athlete, and was in the first boat's crew ever organized at Harvard. He took no very high honors, but he faithfully did his allotted tasks. Upon entering the Medical School, he used to say, he first awoke to his life's work, as play had been his object during his college days. He became earnest and was ever at work, to do what the hour called him to perform.

When I met him as an assistant he had no flourish or pretense or servility about him. He was always deferential, but not crouching submissively to me, or any one, though cheerfully undertaking what was imposed upon him by his superiors. He rarely, if ever, failed in the due performance of the task; always had that bright yet dignified manner which he subsequently bore in his professional career. In his meetings with you, his associates, I am sure you always found him simple, thorough, and true. When dealing with a professional associate he needed no "Code" of by-laws to keep him fair and honest. His own well-balanced mind and generous spirit forbade him to do anything to injure a brother physician's reputation even in the smallest degree.

To do so by a word, a covert sneer, or even a smile of doubt in the presence of by-standers, as is done at times, by some of the stoutest defenders of the "*Code*," he abhorred. I shall never forget the glee (for, among other good qualities he heartily enjoyed a joke) with which he told me, only a few months ago, how he and others had *squelched* instantly a proposition coming from a committee of the Counselors of the Massachusetts Medical Society, a proposition, which, had it been adopted by the Society, would have violated one of the prime rules of common courtesy, and even those of simple hospitality in many of our country villages and small towns.

As a teacher of medicine I need say nothing, as most of the younger men of this Society must have known him well in that capacity. His object was to teach a student the methods that should be pursued in order to come to a perfect diagnosis. I was much struck with the remark made by one of the juniors of our profession, when I asked what Dr. Ellis's reputation was as a teacher among the pupils. He paused before replying, and then, in substance, said as follows: "Dr. Ellis while unraveling any case was less brilliant than some other more fluent professors, and he was called a little 'slow,' and tedious as some thought. But upon our arrival at Vienna, by comparing our method of grappling with cases in the German hospitals with the desultory and imperfect examinations made by students of some noted schools in other large cities of our country, we soon found that we had been *more thoroughly drilled* than they. The result was that we understood more quickly and fully than they did all of the intricacies of a case."

No higher praise could be given to any professor than this simple, but significant, expression of one of his pupils.

He has left an unfinished work entitled, I believe, Symptomatology. On this he was laboring every hour that his disease permitted him to work, even to the the last few days of life. I sincerely hope that it has been so far finished that his literary executors can publish it. I was visiting him one morning while he sat half erect in bed. He was working then upon it, and was kind enough, at my request, to read to me a short extract. From that, I was led to feel that the work would not only add to his well-merited reputation, and serve the student and junior practitioner long after the writer's death; but that it would perhaps mark an era in the correct study and practice of clinical medicine similar to that which followed the publication of the great French teacher Louis's works. In truth, it seemed founded upon the same principle that underlies all of Louis's works, namely, the absolute necessity of making a most careful diagnosis of a case before proceeding to treat it. It was fortunate for several American students of fifty years ago, that even Louis, the great clinical teacher of that day, whose principles are now everywhere more or less perfectly carried into practice, was considered rather "slow" by his compatriots. Consequently our small "coterie" of Americans and of Swiss students had his oral instructions all to ourselves, which has, of course, been of immense advantage to every one of us during our lives.

In Dr. Ellis's connection with the Harvard School his influence was always for a higher education and better practical measures. He may be called a "conservative reformer." He never moved until his judgment approved of a plan. When once decided in his opinion, no obstruction could prevent him from boldly urging forward the cause against the opposition of even the most powerful. This was seen especially in his efforts at progress in the Medical School's late reforms. During his last illness, he told me that every step taken forward was violently and persistently opposed; and I sincerely believe that had it not been for the efficient work of Dr. Ellis, aided by his earnest *young* coadjutors in the Faculty, no reform would or could have been accomplished, and no one contributed more than our friend did as Dean of the Faculty to these very desirable results. During his long illness he, from love of the School, remained one of the Faculty. At length, his disease compelled him to resign his position of Dean, but he still hoped, even until the end, that in the intervals of his torture he would at times be able to meet, and to lecture to his pupils.

Surely I think that even with these brief hints at the various passages of the life, and allusions to the intellectual and moral qualities of our friend, we can feel, in the language of Wordsworth, that

> "The child is father to the man,"

and his days were

> "Bound each to each by natural piety."

May this fine example of a *life of true work* not be lost on any one of us.

Yours very truly, HENRY I. BOWDITCH.

DR. C. D. HOMANS said: Probably no one present knew Dr. Ellis so long or so intimately as I did. Perhaps Rev. Dr. Bartol may have done so, but certainly no one else. We were boys together, we were in college together, we were abroad together, and we have been together ever since. When in college Dr. Ellis though a good scholar was not brilliant, but was a hard student and a continuous worker. He was always a favorite, and was much interested in the pastimes of those days. He was an athlete, and was a member of the first boat club which was formed at Harvard College. We bought a boat together when we were in the Massachusetts General Hospital, and in our spare hours were fond of rowing on the Charles

River. The water then came up almost to the stone building which at that time comprised the entire hospital. He always kept up his love for athletic exercise, and even in his last years was very fond of walking, often preferring to go on foot rather than in his carriage to visit his patients. In some ways Dr. Ellis was particularly fortunate. He was hardly ever ill during his life until the commencement of the disease of which he died. He was fortunate also in possessing a competence, and was not obliged to trouble himself in regard to pecuniary matters. While a student in the Medical College he was one of the few who attracted the attention of the late Dr. J. B. S. Jackson, who for years made all the autopsies in and around Boston, and from him Dr. Ellis derived that love for, and knowledge of morbid anatomy which was so useful to him in after life. He was a worker as long as he lived. During his last illness, in fact up to within a few days of his death, he was engaged in the intervals of his sufferings in the preparation of a medical work for the press, which he left nearly finished.

It afforded him a great deal of satisfaction to be informed that, within a few days of his last attack, a letter had been received by a friend from a young physician, at present in Vienna, who stated that as a result of the careful clinical training received from Dr. Ellis, students from Boston were able to profit much more largely from the advantages offered by European hospitals than were those coming from other American cities and schools.

The disease from which Dr. Ellis died was ulcer of the duodenum. It first commenced about nine years ago, and continued to cause him more or less suffering from that time until his death. It was at first feared that it might be malignant, but the course of the disease disproved this, and it was then supposed to be ulcer of the stomach, but finally the diagnosis of duodenal ulcer was made, and was found by the autopsy to be correct. Death finally ensued from perforation and consequent peritonitis. Dr. Ellis never was willing to make a positive diagnosis of his own case. Through all his sickness he never lost his interest in what was going on. Just before his death he was planning what he would do when he got out again. For some time he was driven in a low carriage, and he was getting tired of this, and thought of buying a coupé as soon as he was strong enough to go out. During the last year he had been obliged to keep his bed much of the time, yet he always got out a little whenever possible. At times he would leave his bed and go for a drive, and and on returning would go at once to bed again. On the day of the last municipal election he rose, and was driven to the polls, and voted, and returning home went immediately to bed as usual, and never rose again. Through all his sickness and suffering he never murmured or complained, but was always patient and resigned, and when the pain became easier his cheerfulness and good humor at once returned. He was always glad to see his friends, and seldom spoke of his own distress.

In all he did Dr. Ellis was actuated by a strong sense of duty and intense love of his profession. He had the greatest interest in the University and Medical College, which he has proved by the fact that he has bequeathed his entire estate to the University after the death of his sister, most of it for the special benefit of the Medical School. As a physician he was loved and respected; as a counselor his advice was sought far and near; as a teacher and professor and public spirited man the entire community knew and appreciated his worth, while only those who were intimate with him can know how faithful he was to every demand which friendship might make upon him.

DR. SARGENT, of Worcester, having been requested, sent the following communication: —

"I am more than gratified, for I am also flattered, in being asked to contribute something to the testimonial of the general 'admiration of the noble and generous qualities' of Dr. Calvin Ellis, whose recent death is so great a loss to the profession and to the public.

"My acquaintance with Dr. Ellis was of long standing, but it was rather friendly than professional, for I never had occasion to have any professional relations with him whatever. It commenced in Paris in one of my periods of residence there, in the year 1850, and I see him now in his long walk from the neighborhood of the Garden of Plants to the schools and the hospitals. Then as always he was studious, sensible, thorough, faithful, and reliable. I renewed my acquaintance with him on his return to Boston, and was somewhat instrumental in his being placed on the commission for investigation of the peculiar pleuropneumonia of cattle, nearly twenty-five years ago. I had afterwards some other public relations with him. His sound sense always, his good judgment, and sincere convictions, and his fidelity to them, won, as they deserved, the greatest respect from the profession and the public.

"I never had the advantage of listening to any of his instructions from the professorial chair, but as I have had them described to me by young men who were so fortunate as to be his pupils, their thoroughness and richness and exactness must have been a very valuable contribution to the distinguished excellence which is so conspicuous in the Harvard Medical School.

"Commencing practice in Boston in a new era, when the microscope had just begun to peer into pathological anatomy, and its use was so seductive and engrossing as, perhaps, to warrant the witticism of our justly admired Dr. Holmes, then not more distinguished in literature than in medicine, and probably the best read American physician of that time, "Now for an era of little men," he recognized all that was true in what was new, and adopted all that was valuable. And so with him always. His scope was large, and great good sense directed his judgment and governed his work. His influence and his example have been a great good and an honor to the profession, and an advantage to the public.

"Let no man say that merit shall not command success."

The following letters were then read by the Secretary: —

HARVARD UNIVERSITY MEDICAL SCHOOL,
BOSTON, MASS., *January* 7, 1884.

DEAR SIR, — In reply to your letter of January 4th it gives me great pleasure to express to you the sympathy of the entire Medical Faculty in the feeling which has prompted your Society to appoint an evening for holding memorial exercises in honor of our late professor of clinical medicine, Dr. Calvin Ellis.

Although I am not authorized by the Faculty to promise any formal coöperation in your services, yet the individual members of that body will doubtless gladly avail themselves of the opportunity thus afforded

of testifying by their presence to their great respect for Dr. Ellis's noble character, and to their high appreciation of the value of his services as Dean of the Faculty during a most important epoch in the history of the School; as a clinical teacher of rare power and enthusiasm, and as a practitioner of medicine gifted with unusual soundness of judgment.

Yours very truly, H. P. Bowditch, *Dean.*

Dear Doctor, — I regret to say that owing to illness in my family I shall not be able to attend the meeting to-night.

Very truly yours, James C. White.

My dear Bowditch, — I am grieved not to be with you to night to show by my presence at least my appreciation of the character of our late associate and friend.

The profession will do justice to his memory.

Let me add my tribute to his fidelity as a physician, his ability as a lecturer, his integrity as a man.

Faithfully yours, D. Humphreys Storer.

Dr. Oliver Wendell Holmes, who was unable to be present, sent the following: —

CALVIN ELLIS.

My recollections of Dr. Ellis go back to the period of his pupilage. Of the large numbers of students with whom I have been in relation as teacher I do not remember one about whose future I felt more assured. He had all the signs of promise; active intelligence, industrious habits, love of his work, a vigorous frame, a cheerful temperament, an agreeable presence stamped with every outward sign of a sincere and manly character. I looked forward to his becoming a leading practitioner, with a confidence which his after career fully justified.

He united many rare qualifications. He had studied disease long and diligently, in the changes left by it in the various organs, and thus laid the foundations of his skill in diagnosis. But he never forgot that medical science is only the handle of the medical art. His assiduity, his patience, his self-devotion as a practitioner were unmeasured and unstinted, as I have known from personal observation. He forgot everything but his patient, he remembered everything for him in the chamber of sickness comforted by his quieting and commanding presence.

Every interest of the profession was very dear to him. The Medical Faculty of the University of which he was so long the Dean, found him a most willing laborer and a generous benefactor. The Boston Medical Library was indebted to him for valuable services and liberal contributions. He could not be otherwise than faithful in all that he undertook, for integrity — wholeness of character — belonged to him in its fullest measure.

Some of you knew this brother of ours more intimately than I can have known him. You will not think, I am confident, that I have exaggerated the excellences of this wise and skillful physician, this true and good man, whose loss will long be felt by the profession and the community. O. W. H.

New York, *January* 7, 1884.

My dear Sir, — I beg the privilege of offering to the members of your Society my sincere condolence in the loss which they have sustained. I had not the pleasure of a personal acquaintance with the late Calvin Ellis; but he was well known to me, and to all interested in medical education, as a painstaking, conscientious student of disease, and as an able, patient, and effective clinical teacher. In his death not only the School with which he was connected, and his professional brethren in your city, but the profession of the whole country and American medicine have sustained a great loss. Cut off in the midst of his useful labors and at an age when many more years of valuable services in behalf of medical education were to have been hoped for, our only consolation is in the reflection that he leaves a noble example which should incite others to follow in his footsteps.

Will you kindly remember me to those who will be present at the meeting on the 9th inst., with the assurance that I should have been glad to have been able to avail myself of your invitation to be present on that occasion.

With much esteem, very truly yours,

Austin Flint.

Rev. Dr. Bartol, upon being invited to make some remarks, spoke with great feeling and emotion as follows: I am here, Mr. Moderator, through courtesy and kindness on the part of this Society. I have listened with great interest and gratitude to what has been said by those who have spoken before me. The atmosphere of this meeting seems like a new consecration to duty. This Professor of Clinical Medicine whom we have assembled to honor to-night was not a *professor* in any other way. Whatever mistakes or vices the science of medicine or its sister professions of theology and law may be liable to, Dr. Ellis was free from them. There was in him no assumption of wisdom or authority. He took no bias in any unprofessional conduct.

In speaking of what Dr. Ellis was, and did, and said, we have referred to him in the *past*, but my feeling toward him is such that I can only speak of him in the *present* tense. Whatever hope we may have of some future life, or heaven after we have left the body, is revived by such fidelity. Every word which has been uttered to-night finds an echo in my own heart.

Dr. Edward Emerson, of Concord, rose and said: "I thank you for the opportunity to say a word for the older students. The character of Dr. Ellis as a physician has been dwelt on in an appropriate and worthy manner in the remarks of those who have spoken. One special feature of his life has, however, not been touched upon, and that is his position among those who were so fortunate as to be his pupils. He was a leader in the medical profession to a striking degree. He gave no long lectures on morals, delivered no tedious homilies, but his daily life exerted a gentle yet continuous influence, which was always a lesson to those about him, and was all the more powerfully felt because it was exerted unconsciously.

"As a friend Dr. Ellis was always thoughtful, unselfish, and devoted, as I know from my own experience. For some time I was in the habit of going to him for advice, not professional but personal, and he always took a most paternal interest in all which personally concerned those more closely associated with him."

The Secretary then read the following resolutions, which had been prepared by one of the members, and which were unanimously adopted: —

Resolved, The Section of Clinical Medicine of the Suffolk District Medical Society at its first meeting after the death of Dr. Calvin Ellis desires to express its admiration of him as a professional associate, a great clinical teacher, and above all as a man of noble character.

Resolved, That our respectful sympathies are hereby tendered to the sister of Dr. Ellis in this, her great loss.

Resolved, That the above resolutions, signed by the Chairman and Secretary of the Section, be forwarded to the sister of Dr. Ellis.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

S. J. MIXTER, M. D., SECRETARY.

DECEMBER 5, 1883. DR. JOHN HOMANS reported

TWO CASES OF ABDOMINAL SECTION TO DISCOVER THE CAUSE OF INTESTINAL OBSTRUCTION.[1]

Dr. Homans showed the strictured intestine removed at the autopsy in the second case.

DR. J. C. WARREN said that he had had no experience in abdominal section, but had performed lumbar colotomy several times. In one case, that of a new-born infant with imperforate rectum, the incision was made in the right side, following the directions of M. Huguier, who shows that the descending colon lies near that side in very young children. The child recovered from the operation, but died some weeks afterwards, steady progressive emaciation following the operation. This form of emaciation, followed by death, has been noticed by some writers where an artificial anus has been made in the ascending colon. In acute cases of obstruction the treatment recommended by Mr. Jonathan Hutchinson, namely, profound anæsthesia, kneading of the abdomen, and inversion of the body, is often successful. Dr. Warren mentioned a case of obstruction in a new-born infant, of unknown cause, and not due to imperforate rectum. After etherization there was a spontaneous discharge of a large amount of meconium, followed by complete recovery.

DR. BUCKINGHAM had had no experience with ether in the acute cases referred to by Dr. Warren, but had had, within a few months, a case of probable intestinal obstruction in which full doses of opium failed to give more than temporary relief, but in which the persistent use of morphia on the fifth day, frequently repeated subcutaneously, and pushed to the limit of safety for twenty-four hours, was followed on the next day by passages of wind from the rectum, and three days later by several large dejections. He had previously reported a case successfully treated by opium.

He inquired of the reader whether in operating for acute obstruction he would, in view of the difficulty in exact diagnosis and of the dangers from the escape of fæces into the abdominal cavity, expect to get as good a series of results as in ovariotomy.

DR. HOMANS replied that on account of the great distention of the intestines much more violent and prolonged handling of the abdominal contents was necessary in cases of obstruction than in an ordinary case of ovariotomy. Perhaps on this account it is better to open the first coil of intestine that presents itself. When a tumor has been for a long time growing in the abdominal cavity the recti and other muscles are relaxed, whereas in acute cases the muscles spring together, and it is very difficult to get a large enough opening in which to work. After operations of this nature it would seem that where the artificial opening is established in the upper part of the intestinal tract the danger of emaciation and starvation is greater than when the opening is near the rectum. Cases of artificial anus following abscess or strangulated hernia of the right side are, however, often seen where this condition has not been produced.

DR. GAY spoke of the discussion on this subject at the last meeting of the British Medical Association, where Mr. Lawson Tait recommended abdominal section in all cases of severe obstruction, while others regarded the groin or lumbar region as a better site for incision. Spencer Wells operates on the right side, as the bowel is more easily reached than on the left. Wounds of the peritonæum, under the present system of operating, are not attended with as great risk as was formerly supposed to be the case. Dr. Gay spoke of a case seen in consultation where complete obstruction had existed for two weeks. There was severe vomiting, but as no tumor could be felt in either the abdomen or pelvis, it was decided to await further developments before operating, and in a few days the bowels moved spontaneously. The patient recovered, and is now alive, at the end of eighteen months.

DR. CHADWICK spoke of the prolonged manipulation of the abdominal contents often found necessary in complicated cases of ovarian and other tumors, and which, generally, is followed by no bad results, mentioning, as example, a difficult Battey's operation in which the abdominal cavity was open for two hours with no consequent ill effects. Aspiration of the intestinal coils, to relieve distention during operation, seems to be a somewhat hazardous proceeding, as it is liable to be followed by peritonitis.

DR. MIXTER mentioned the not infrequent occurrence of a meso-colon as being an additional reason for preferring laparotomy to colotomy. Whenever this condition exists, and it is impossible to diagnosticate its presence or absence before operation, the peritoneal cavity is necessarily opened, and under these circumstances the operation and after-treatment are much more simple when the wound is in the anterior abdominal wall. He had recently seen in the dissecting room a subject in which a broad meso-colon was present.

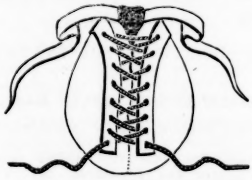
DR. CHEEVER said that much more successful results could be looked for in cases of chronic obstruction than in cases of acute obstipation, especially in children, where the symptoms are very rapid, and valuable time is wasted in vain medication, and operative interference comes too late. In intussusception the intestine soon becomes adherent and perhaps gangrenous. In such cases everything depends on an early operation. A boy, seen by Dr. Cheever in consultation, had had complete obstipation for some days. The abdomen was opened, and a constricting band was found and divided. Immediately there was an immense discharge of gas and fæces. Unfortunately, acute peritonitis was already present, and the patient died the next day. Probably his life could have been saved by an earlier operation. Dr. Cheever had never seen peritonitis following aspiration. Even stabs of the abdomen, with protrusion of intestines and omentum, as often seen in hospital practice, almost always recov-

[1] See page 145 of this number of the JOURNAL.

er, as, for instance, the case of a child brought to the City Hospital with a coil of intestine lying on the outside of the abdomen, having probably been exposed for ten or twelve hours. The opening was enlarged, and the bowel returned, after being thoroughly washed and warmed. Recovery followed without a bad symptom. As bearing on the subject of starvation following openings of the upper part of the intestinal tract, Dr. Cheever spoke of a case of artificial anus, caused by pelvic abscess, and followed by progressive emaciation and death.

A SUBSTITUTE FOR STRAPPING THE TESTICLE AND THE TREATMENT OF HYDROCELE.

Dr. J. C. Warren showed a chamois-leather bag which he had devised for the purpose of exerting pressure on a small collection of fluid left in the tunica vaginalis remaining after an operation for radical cure. The bag can easily be applied by isolating that portion of the scrotum containing the testicle to be compressed and forming a pedicle, which is preserved by tightening the chamois-leather string. The bag is then laced from above downwards, and, if it has been made to fit snugly, exercises a gentle and equable pressure. If it is



necessary to increase the pressure a few turns of a common narrow roller bandage around the equator of the globular mass are all that is necessary. This bag is free from the well-known discomforts of plaster, is easily made and applied, and can be removed and reapplied by the patient himself as often as is desirable, thus avoiding excoriation at constricting points. In the single case in which it was used the effusion promptly disappeared, and has not since returned at an interval of nine months.

Dr. Warren spoke of the advantages of Dr. Levis's method of treating hydrocele by the injection of one drachm of the liquefied crystals of carbolic acid. It appears to be specially adapted to the lighter forms of the disease, is almost painless, and produces very moderate reaction, so that the private patients he had operated upon on a Saturday were able to be about again on the following Monday. In but one case had he found any perceptible discoloration of the urine, although this symptom of carbolic absorption had been carefully looked for in all his cases. He recommended the substitution of the ordinary horse subcutaneous syringe, with a trocar attachment to one of the needles, instead of the ordinary trocar and Sims' ear syringe which Dr. Levis uses. In large hydroceles of long standing the acid does not produce any perceptible effect upon the disease. He spoke of the discomforts and comparatively long confinement attending the operation by incision, even under the most careful antiseptic precautions, as laid down by Volkmann. The constitutional disturbance and the local œdema, with occasionally sloughing of the connective tissue, even when the wound has been kept aseptic, make this an operation which should be reserved for those cases only which are not amenable to other modes of treatment.

Dr. Strong spoke of the difficulty of keeping a Lister dressing on the scrotum after operation. There is always less danger of œdema when the scrotum is kept raised.

Dr. Gavin, in injecting hydroceles, uses Delano's rubber bulb syringe, as being more convenient than the cylinder syringe.

Dr. Marcy had had abscess and sloughing follow the injection of a drachm of liquefied carbolic acid crystals. One half that amount has been found to be equally effectual in curing the hydrocele, and is not accompanied by so great danger of excessive inflammation.

Dr. Cheever never attempts a radical cure in old men, but advises them to be content with tappings repeated as often as necessary, as a low form of inflammatory œdema of the scrotum, ending in death, is described as peculiar to the aged.

FOREIGN BODIES REMOVED FROM THE ŒSOPHAGUS AND THE URETHRA.

Dr. Gay showed a large fragment of turkey bone removed the night before, by a bristle probang, from the œsophagus of an old lady; and also showed a black-headed steel bonnet pin, six inches long, removed from the urethra of a man seventy-five years old, who, "having nothing else to do," had introduced it head first, and had let it slip through his fingers.

MASSACHUSETTS MEDICAL SOCIETY.

COUNCILORS' MEETING.

A stated meeting of the Councilors was held at the Medical Library, Boston, on Wednesday, 6th inst.

The meeting was called to order at eleven A. M., by the President, Dr. Alfred Hosmer. Eighty-six Councilors indicated their presence by signing the roll.

APPOINTMENT OF DELEGATES AND COMMITTEES.

On nomination by the Chair the following delegates to other State Medical Societies were appointed: —

Maine: Drs. F. A. Howe, of Newburyport; J. T. G. Nichols, of Cambridge.

New Hampshire: Drs. G. M. Morse, of Clinton; G. W. Snow, of Newburyport.

Rhode Island: Drs. J. Dwelly, of Fall River; C. Howe, of Taunton.

Connecticut: Drs. G. W. Burdett, of Clinton; E. C. Richardson, of Ware.

New Jersey: Drs. H. M. Holmes, of Adams; S. W. Bowles, of Springfield.

Committees were appointed: —

To Audit the Treasurer's Accounts: Drs. C. C. Tower, J. O. Marble.

To Examine the Library: Drs. O. W. Doe, Z. B. Adams.

To Examine the By-Laws of District Societies: Drs. S. D. Presbrey, J. C. White, F. W. Chapin.

REPORT OF COMMITTEE ON DIPLOMAS.

Dr. W. L. Richardson, for the Committee on Medical Diplomas, presented the following: —

The Committee on Diplomas, to whom was referred the petition of the College of Physicians and Surgeons, of Boston, requesting to be placed on the list of colleges whose diplomas are recognized by the Massachusetts Medical Society, beg leave to submit the following Report: —

The Committee have devoted a great deal of time in ascertaining the facts on which their report is based. Much of the evidence which they obtained was of a confidential character and such as could not therefore properly be made public.

They have carefully considered the circumstances which led to the establishment of the college; the character and professional ability of the gentlemen who have, at one time or another, formed its corps of instructors; the facilities at the disposal of these teachers for giving clinical as well as didactic teaching; the requirements for a degree and the manner in which those requirements have been enforced; the nature of the examinations, and the character of the candidates at the time they were admitted to receive their degree. In accordance with instructions received from the Councilors, they have given the petitioners a hearing, at which the dean, registrar, and two other members of the Faculty were present. Subsequently the committee, in company with the gentlemen above mentioned, visited the rooms occupied by the college and inspected the facilities there shown for the didactic and clinical teaching of the students.

As the result of their investigation the committee were impressed with the fact that, while the origin of the School was, to say the least, questionable, yet certain members of the present Faculty were evidently endeavoring to so manage it as to furnish a fair medical education to such students as were unable to pay the fees charged by the best known schools in the country, and to give the degree of M. D. under such restrictions as would enforce the requirements contained in their annual announcements. The committee was also of the opinion that such has not always been the practice in this School.

Carefully weighing all the facts in their possession, the committee would report that they are unwilling to advise that the degree of M. D., heretofore given by this School, be recognized, and also, considering the effort now apparently being made by certain members of the Faculty to improve the character of the college, they are unwilling to pass judgment on its probable future.

They would, therefore, recommend that at the present time the petitioners have leave to withdraw.

WILLIAM L. RICHARDSON.
A. H. COWDREY.
EDWARD J. FORSTER.

BOSTON, *February* 1, 1884.

DR. DUDLEY said he was confident the committee had been misled to some extent in their investigation, though he doubted not they had performed their duty thoroughly. He moved that the subject be recommitted to the committee so far as the future male graduates of the college are concerned.

DR. RICHARDSON asked if the mover expected a report at the next meeting? It would be useless to recommit the matter if a report is to be made in the near future. He said this with no intention to "pigeon hole" the question if no time was fixed for the committee's report.

DR. DUDLEY replied that he would not press the matter as to the time of the report.

The motion was then adopted.

Voted, on motion of DR. DUDLEY, that the committee be instructed to give the college a hearing before making another report.

ROOMS.

The treasurer, DR. DRAPER, called attention to the fact that the lease of rooms from the Medical Library Association will expire at the end of the present month.

DR. MILLET expressed the hope that a better place would be provided for the future meetings of the Council.

Voted, That the matter be referred to the officers of the Society with full powers.

AMENDMENT TO THE BY-LAWS.

DR. WINSOR offered the following: —

After the words "in writing," in the second line of the first paragraph of By-Law XXXIII., insert the words, "and may originate either in the Society or its Council."

A discussion ensued, followed by the rejection of the amendment — ten in the affirmative, forty in the negative.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

SEVENTY-EIGHTH ANNUAL MEETING.

FIRST DAY, FEBRUARY 5TH. MORNING SESSION.

THE Society convened in Geological Hall, Albany, and after prayer the President, DR. ALEXANDER HUTCHINS, of Brooklyn, read his inaugural address. Various committees were then appointed, after which communications were received from New York, Albany, Ontario, and Washington County Medical Societies.

DR. W. M. CARPENTER read a memoir of the late Dr. J. Marion Sims.

RESOLUTIONS, ETC.

DR. A. JACOBI offered a resolution, which was unanimously adopted, urging that Congress should provide a fire-proof building for the Museum and Library of the Surgeon-General's Office, and calling for the prompt publication of the remainder of the Catalogue, and the further increase of the Library.

DR. S. O. VANDERPOEL called the attention of the members to the effort to raise a fund for the erection of a suitable memorial of the late Dr. J. Marion Sims in the city of New York, and commended the project to their favorable consideration.

DR. T. F. ROCHESTER, of Buffalo, from the Committee on Prize Essays, reported in favor of awarding the Merritt H. Cash prize to Dr. Ghislani Durant, of New York, for his essay on Tubercles of the Breast, and commending an essay on Consumption, author unknown, as worthy of publication.

The following papers were then read and discussed to some extent: Two Unusual Cases in Obstetrical Practice, by Dr. W. C. Wey, of Elmira; A Case of Double Harelip, by Dr. J. P. Creveling, of Auburn; Prophylaxis of Summer Complaint in Children, by Dr. D. Little, of Rochester; Canalization as applied to Amputation of the Female Breast to assure Primary

Union under One Dressing, by Dr. A. G. Gerster, of New York; An Operation for correcting Deformity of the Auricle, by Dr. O. D. Pomeroy, of New York; and Poisoning by Potassium Chlorate, by Dr. George B. Fowler, of New York.

AFTERNOON SESSION.

The following papers were presented: The Establishment of Hospitals in Small Cities, by Dr. E. H. Parker, of Poughkeepsie; Congenital Lipoma, by Dr. A. Jacobi, of New York; The Value of Electricity in Diagnosis, by Dr. L. E. Felton, of Potsdam; A New Method of Partial Extirpation of the Cancerous Uterus, by Dr. E. Van de Warker, of Syracuse; Orbital Cellulitis, by Dr. T. R. Pooley, of New York; Operations for the Closure of the Hard and Soft Palate, with Results, by Dr. A. Vanderveer, of Albany; A Case of Sympathetic Serous Iritis, with Remarks, by Dr. David Webster, of New York; A Plea for the Pharmacopœia, by Dr. Laurence Johnson, of New York; and Horse-Hair Sutures, by Dr. Daniel Lewis, of New York.

The report of the Committee on Experimental Medicine was also read by Dr. J. G. Curtis, of New York, its secretary.

EVENING SESSION.

This session was devoted to the subject of

THE CODE OF ETHICS.

On motion of Dr. Hodge the communication of the Ontario County Society, which had been laid upon the table at the morning session, was taken up. It affirmed the allegiance of the Society to the National Code of Ethics, and directed its delegates to endeavor to secure the return of the State Society to the same.

On motion of Dr. Piffard it was ordered placed on file.

Dr. Baker presented a communication from the Niagara County Society protesting against the action of the State Society in adopting the New Code.

In the absence of Dr. Didama, Dr. Moore, of Rochester, moved that the resolution of the former, which had been laid upon the table last year, should be taken up and read. Carried. This provided for the repeal of the action of the Society in 1882, and left the National Code in force.

Dr. Rochester, of Buffalo, in moving the adoption of the resolution, remarked that he believed that such action would result in restoring unity and good feeling, and that it was the duty of the members to consider first the best interests of the profession, and afterwards those of the Society. This was now in rebellion to the American Medical Association, to which it ought to have appealed before adopting the New Code of Ethics.

Dr. Didama having entered made some extended remarks in advocacy of his resolution. Forty out of sixty county societies in the State, he said, disapproved of the action of the State Society, and the adherents of the New Code numbered less than one fifth of the regular profession in the State. He called, therefore, on the minority to give up their Code, and refer the matter to the American Medical Association for arbitration.

After remarks by Drs. Roosa and Moore the ayes and nays were called for on Dr. Didama's resolution, when it was found to be lost by a vote of 107 to 124.

A motion by Dr. Jacobi to abolish all codes was discussed, and finally withdrawn, after which the Society adjourned.

SECOND DAY, FEBRUARY 6TH. MORNING SESSION.

THE LICENSING OF MEDICAL PRACTITIONERS.

Reports from the treasurer and a number of committees having been received, the recommendation of the Committee on Legislation that the bill known as Assembly Bill No. 120 should receive the sanction of the Society, and that the committee should be authorized to urge its passage, was made the special order of the day. This bill provides that on or before the first day of June next the Governor shall appoint a medical faculty of the "University of the State of New York," to consist of nine members (six regulars, two homœopaths, and one eclectic), three of whom shall serve for three years, three for four years, and three for five years, whose duty it shall be to examine all applicants for license to practice medicine and surgery, to confer the degree of M. D., and to refuse or revoke licenses.

A motion by Dr. Hopkins, of Buffalo, to adopt the report, was discussed by Drs. Loomis, Piffard, Jacobi and Hopkins, and Dr. Agnew then offered as an amendment that the report be returned to the committee with instructions to draft and advocate the passage of a bill to regulate the licensing of medical practitioners in the State, and that four additional members be added to the committee for that purpose. After further discussion the amendment was laid on the table.

AFTERNOON SESSION.

The discussion of the same subject was continued, and Dr. Joseph W. Howe, of New York, offered an amendment to the effect in lieu of all proposed legislation on the subject of granting licenses, a committee of the State Society should be appointed to draft a plan for a commission to visit the medical colleges, superintend and inspect their methods of examination, and report to the Society at its annual meetings. After a lengthy debate, in which Drs. Dalton, Hopkins, Vanderpoel, Jacobi, Seymour, Roosa, Loomis, Wey, Rochester, Perkins, Baker, Campbell, Sturgis, Frazer, and Vanderpoel participated, it was finally resolved, on motion of Dr. Piffard, that the question should be referred to Drs. A. L. Loomis, A. Vanderveer, and J. G. Curtis, in conjunction with the Committee on Legislation, who should report to the Society next year a bill covering the subject under discussion.

The President announced as a committee to coöperate with the Society for the Prevention of Cruelty to Children, Drs. Jacobi, Vanderpoel, and Moore.

PRIZE ESSAYS.

Dr. Rochester, from the Committee on Prize Essays, announced that the committee wished to modify their report made at a previous session.

The minority report was then read by Dr. W. W. Potter, of Buffalo, and in this it was stated that the Merritt H. Cash prize was designed for an original essay, and that the essay on Tubercles of the Breast, which was fifty pages in length, contained but thirteen of original matter.

On motion of Dr. Vanderpoel the report was adopted, and no award of the prize was made.

The following papers were read: Foerster's Method of Ripening Cataract, by Dr. Mittendorf, of New York; House Sanitation, as it is, and as it should be, by Dr. Sheehan, of Rochester; Spontaneous Pyemia, by Dr. Todd, of Parish; the Care and Preservation of Medical

Pamphlets, by Dr. Fisher, of Sing Sing; Strangulated Hernia, by Dr. Chapman, of Medina; Note on the Treatment of the Derangements of the Digestive Organs, by Dr. Castle, of New York; Hay Fever, by Dr. Roe, of Rochester; Dysmenorrhœa and its Treatment by Dilatation, by Dr. Potter, of Buffalo; Primary Drainage and Secondary Drainage, by Dr. Fowler, of Brooklyn; the Mechanical Treatment of Hip-Joint Disease, by Dr. M. J. Roberts, of New York; Synovitis of the Knee and Ankle Joints, by Dr. Phelps, of Chateaugay; and Morbid Somnolence, by Dr. Dana, of New York.

EVENING SESSION.

The annual address was delivered by the President, DR. HUTCHINS, in the assembly chamber, on the subject,

THE RECIPROCAL ATTITUDE OF THE MEDICAL PROFESSION AND THE COMMUNITY.

In it he advocated the choice by the community, through its law-makers, of an acceptable judicious body to decide as to the fitness of all candidates to assume the responsibilities of the profession. At the close of the address the Society and its invited guests adjourned to the Delavan House, where the annual banquet was held, and the usual toasts responded to.

THIRD DAY, FEBRUARY 7TH. MORNING SESSION.

DR. PARTRIDGE, of New York, read a paper on Face Presentations, and DR. JACOBI, of New York, one on Arsenic and Digitalis in Phthisis.

ELECTION OF OFFICERS.

The report of the Nominating Committee was then made, and the following officers were elected for the ensuing year: President, Dr. B. F. Sherman, of Ogdensburg; Vice-President, Dr. P. R. H. Sawyer, of Bedford; Secretary, Dr. William M. Smith, of Syracuse; Treasurer, Dr. Charles H. Porter, of Albany; Censors, Southern District, Drs. F. A. Castle, G. H. Fox, David Webster; Eastern District, Drs. E. D. Ferguson, N. L. Snow, Le Roy McLean; Middle District, Drs. A. Churchill, J. K. Chamberlyne, Robert Frazier; Western District, Drs. T. F. Rochester, R. L. Hovey, T. Deman. The various committees were also elected, as well as a number of permanent members and the delegates to different State Medical Societies, the Canadian Medical Association, the British Medical Association, and the Ontario Medical Association. Drs. Vanderpoel, Phelps, Roe, Vanderveer, Creveling, Bailey, Hutchins, Jacobi, and Shrady were elected delegates to the International Medical Congress at Copenhagen, and Dr. W. G. Bronson, of Connecticut, was elected an honorary member of the Society. After the usual votes of thanks the Society then adjourned.

Recent Literature.

The Principles and Practice of Surgery. Vol. III. By D. HAYES AGNEW, M. D., LL. D. J. B. Lippincott & Co. Philadelphia: 1883.

This volume completes the System of Surgery upon which Dr. Agnew has been at work for the past five years.

It contains chapters upon Diseases of the Eye, the Ear, and other branches in which the general surgeon is being rapidly displaced by the specialist, and the thoroughness with which these subjects are treated shows the training of the old school, before medical practice underwent its modern subdivisions.

The comprehensiveness of this work will make it of especial value to the practitioner at a distance from cities and hospitals, who is thrown upon his own resources; and the suggestions for treatment are conservative and wise.

The chapters upon Syphilis and Tumors are carefully and concisely written, presenting their subjects in so condensed a form that a vast amount of information is given in a very small space. The illustrations of the tumors are particularly good.

When so much ground is covered, and the space is so limited, an accurate account of all surgical procedures is not of course possible; still, the chapter on Orthopædic Surgery is hardly complete with no account of osteoclasis, as applied either to bow legs or to cases of hip anchylosis with faulty position.

MacEwen's operation for knock-knee is figured as if a wedge-shaped piece of bone were removed from the femur, whereas the operation really consists in a simple section of the bone with a chisel.

As a guide to practice, Agnew's Surgery will take a high place, not upon the book-shelves, but in the estimation of practitioners. If, however, a complete investigation of a special subject is desired, it will not be found to compare with several of the modern encyclopædic works.

The Fourth Annual Report of the State Board of Health of South Carolina.

This report appears somewhat diminished in its material contents, with the following apology as an introduction: "Heretofore much space has been given to papers upon sanitary matters and preventive medicine; . . . but objections having arisen from those whose opinions are entitled to respect, to this mode of circulating what cannot but be deemed valuable information, and which is very generally adopted by the Boards of Health of other States, the Executive Committee has decided, in deference to the views of those who urge the objection, and who would have the report wear less 'the appearance of a medical journal,' to publish this year only such papers as have been supplied by the members of the committee, and by the county and town Boards of Health."

The Report contains the following papers: —

Report of the Secretary, with Details of the Quarterly Meetings of the Board.

Reports of Sub-Boards, each of which has Supervision of a County.

Report of Committee on the Medical Topography of South Carolina, containing Valuable Information as to the Climatic and Physical Features of Different Sections of the State, by Dr. F. F. Gary.

Brief Reports on Endemic and Epidemic Diseases, and also on Penal and Charitable Institutions, by Dr. J. F. Prioleau.

Report on Quarantine, by Dr. T. G. Simons.

On the Sanitary Regulation of Schools, by Dr. C. R. Taber.

— "The premature Brougham" is the suggestive expression by which a correspondent of an English journal refers to a common burden which weighs down the young practitioner.

Medical and Surgical Journal.

THURSDAY, FEBRUARY 14, 1884.

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TRANSITORY APHASIA IN TYPHOID FEVER.

EVERY clinical observer who may have had occasion to see a large number of cases is well aware of the numerous and varied complications attendant upon typhoid fever, complications arising largely from the changed state of the blood and tissues. Derangements of the mental faculties due to cerebral anæmia and functional torpor of the gray matter are sufficiently common to be the rule rather than the exception, but a genuine transitory aphasia attendant upon typhoid is very rare.

A case of this sort occurring in Professor Bäumler's clinic at Freiburg gave rise to an investigation of the literature of typhoid fever and the collection of twenty-seven other cases, the details of which in connection with nine more cases complicating other acute exanthemata — five in variola, two in measles, one in scarlet fever — and erysipelas is not devoid of interest.[1]

The disturbances of speech in these cases belonged to the amnesic or ataxic aphasias, or exhibited a mixture of the two classes, and a very large proportion, twenty-five out of twenty-eight of them, occurred in children, as might be anticipated from the greater impressionability of the nervous system in children. The majority, eighteen, of the patients were between seven and thirteen years of age, five were between three and six years, one was fourteen, and the age of one child was not fixed. Only ten of the cases were females.

When grouped according to the period at which the aphasia declared itself we find twenty cases developing during the course of the fever, and six during the stage of convalescence, the second and third weeks having been the period of election. In only one case is any paralysis reported, and that a right hemiplegia, in a boy, developing fourteen days after the appearance of the aphasia, and disappearing entirely in a short time, although in three other children a transitory paresis or incoördination of movements of the upper or lower extremities was manifested. In two cases deafness, a not very uncommon complication in adults, without aphasia, was observed.

In most of the cases the typhoid fever was of a severe type, as shown by other nervous symptoms; consciousness, however, was not lost in any, or, at the most, only dimmed for a short time. Only one case ended fatally, the others recovering entirely. In most of these patients the disturbance of speech lasted from three to six weeks, the shortest duration being two days, and the two longest four months and four years respectively. In general the power of speech returned almost as suddenly as it was lost, with the exception of some little hesitation at the beginning in finding the proper expression.

Of the cases of transitory aphasia reported as attendant upon the acute exanthemata, one, in variola, occurred during the prodromal stage; one, in scarlet fever, at the height of the disease; four, of which three accompanied variola and one measles, toward the end of the febrile stage; and two, one in measles and one in erysipelas, during convalescence. All of these cases, except two of small-pox, also ended in recovery. In proportion to the relative frequency of the diseases, aphasia would seem from this to be a less uncommon complication of variola than of typhoid.

Beyond a somewhat severe type of disease and more or less hyperpyrexia these cases exhibit no especial ætiological factor in common to account for the occurrence of the aphasia, and in the two cases followed by autopsies, one of typhoid and one of small-pox, with the exception of a moderate degree of œdema no macroscopic changes were detected in the brain.

[1] Deutsch. Archiv klin. Med., page 56, 1883, Dr. Richard Kühn.

ANOTHER UNITED STATES PHARMACOPŒIA. IS IT NEEDED?

THE bill introduced into Congress last month by Mr. Randall, of Pennsylvania, providing for a national pharmacopœia, to be prepared under the auspices of army, navy, and marine hospital surgeons, seems, at first sight, one which ought to be favored by the medical and pharmaceutical professions throughout the country.

We suspect, however, that a certain proportion of the enthusiasm which such a proposition may awake would be due to ignorance of the position now held by the United States Pharmacopœia, which, although in no sense emanating from the government, has been adopted as a legal standard of strength and purity in several States, and by the Treasury Department of the United States, as shown by the following extract from the Customs Regulations, 1874: "Art. 450. All imported drugs, medicines, and medicinal preparations are to be tested in reference to strength and purity by the standard established by the United States, Edinburgh, London, French, and German Pharmacopœias and Dispensatories. If the articles . . . prove to conform in strength and purity to the pharmacopœia and dispensatory of the country of their origin they are exempt from the penalties of the law, but if produced, manufactured, or prepared in any other country than the last mentioned, they must conform to the United States Pharmacopœia and Dispensatory." The Dispensatory is mentioned in the preceding regulation because the United States Pharmacopœia of 1870 was very meagre in its details, and the Dispensatory alone gave much of that which is now, by the new revision of 1880, contained in the last Pharmacopœia. This Pharmacopœia has been compiled, arranged, and stud-

ied by delegates from all parts of the Union, and embodies special suggestions from many medical societies and specially skilled individuals.

It must certainly be considered to fairly represent the wishes and opinions of all portions of the United States as fully as the one proposed is likely to do.

The result has been one of which we have no reason to be ashamed. The United States Pharmacopœia is admitted by competent authorities to be one of the best national pharmacopœias, if not the best, in the world, and, what is very much to the purpose, arrangements were made by the convention which framed it for maintaining it in its present high position and keeping it abreast of the progress of science. We cannot see what is to be gained by another. If the new one is worse than the old it certainly is not wanted. If it is equally as good we shall have the intolerable nuisance of two authorities, unless the government can compulsorily retire the present work, not on account of age or inefficiency, but on the lowest political ground of making room for somebody who wants the place and has a "claim."

The chances of a new pharmacopœia being distinctly better in the sense of being more scientific, more convenient, or more fully representing the wishes of the country as regards the selection of articles to fill its lists, cannot be considered very good when we remember that the gentlemen chosen from the three government corps (which corps, by the way, were fully represented in the last convention for revision) can hardly be considered experts, if, indeed, they be not almost amateurs, and the work must be largely done either by the men who have already given their best to the present Pharmacopœia, or by others not at all likely to be their superiors in knowledge, zeal, or experience; and, if current reports relative to the influences brought to bear upon the selection of officers for duty are true, the fear that political and social considerations may have more weight than scientific and professional ones is by no means an unfounded one.

If the United States want a more authoritative pharmacopœia they can easily give the existing one all the authority desired. May we be pardoned the surmise that disappointment at the control of the present Pharmacopœia being no longer almost exclusively vested in the "great medical centre" has something to do with this new move!

MEDICAL ATTENDANCE UPON SICK JURORS.

A RECENT decision of the Massachusetts Supreme Court concerning the attendance of a physician upon a sick juror has some interest. The defendant in a trial by jury, against whom a verdict was rendered, appealed to have it set aside, and a new trial granted on account of the acts of the officer having the jury in charge. It seems that the court was adjourned Friday afternoon until Monday morning, leaving the jury in charge of an officer, with instructions to discharge them if they did not agree by ten o'clock P. M. that evening, and if they agreed to have them seal up the verdict and return it to court on Monday morning. After the judge had left town the foreman of the jury told the officer that a juror was sick, had a chill, and required some brandy. The officer saw the juror, and thought him sick. He sent to a druggist and got a two-ounce vial of brandy, and passed it to the foreman. Afterwards another juror fell upon the floor in a fit, and the officer sent for a physician, and allowed him to administer to the juror in the fit, who recovered. Subsequently the jury agreed upon a verdict for the plaintiff, sealed it up, and were discharged, and returned the verdict to the court on Monday. The presiding judge in superior court was satisfied that the officer acted in entire good faith, and the defendant was in no way prejudiced by his acts.

Upon the motion for a new trial the court said: "We do not think that the rules of law imperatively require us to hold that it is a legal cause for us to set aside the verdict when a juror, who is seized with a sudden temporary indisposition, without the intervention or knowledge of either party to the suit, obtains and uses, merely for the relief of his disease or pain, a small quantity of spirits, and where it appears that he is not thereby disqualified for the due performance of his duty as a juror.

"The question of the effect of the introduction of the physician into the jury-room for the purpose of giving medical aid or relief to the juror who appears to have stood in pressing need thereof is not free from difficulty. It is, however, obvious that a merely temporary attack of sickness, though it may for the time being incapacitate the juror, is not a necessary ground for the discharge of the jury. It is proper, when the circumstances will admit, to await the result, and see if, within a reasonable time, he so far recovers as to enable the trial to proceed or a verdict to be returned. If such a sickness is brought to the attention of the court while the jury is deliberating on their verdict, and medical attendance appears to be necessary, the better way ordinarily would seem to be for the court to select a suitable physician, and to caution him in advance not to enter into any conversation with any of the jury upon the case, or upon any matter except such as may be directly connected with the needed relief for the disorder. In the present case the judge was not accessible at the time, but nothing appears to have been done differently from what might well have been ordered by him. There is no reason to suppose that either the officer or physician said anything to any juror which in any way bore upon the case, or that the course of substantial justice was to any extent perverted or disturbed by what occurred. This was a matter which was especially for the presiding justice to investigate. We cannot say, as a matter of law, that a new trial must necessarily be granted."

MEDICAL NOTES.

— A correspondent of *Science* reports a remarkable instance of protraction of life in a spider during complete deprivation of food. He says that on the

15th day of October, 1881, he inclosed a spider in a small paper box. From that day to the 7th day of May, 1882 (two hundred and four days), he carefully watched and daily inspected the prisoner, and can positively affirm that he partook of no food or water. The box in which the spider was confined was as clean and white as white paper could make it, and remained so while he continued to occupy it, except for the appearance of a few dark specks, which were supposed to be the droppings of the prisoner. He was carefully observed every day, and sometimes two or three times in a day, and no emaciation or symptoms of weakness, or even irritability of temper, were detected while he lived. He always appeared as active, and looked as plump and healthy, as he did the day he was dropped into the box, until within three days of his death, when it was first observed that when the box was tipped he would fall from his position.

NEW YORK.

— In consequence of the action of the State Medical Society in resolving to adhere to the New Code of Ethics, a number of members who are supporters of the National Code met at the Delavan House, Albany, February 6th, and formed a new State society, which is to be known as the New York State Medical Association. Sixty-five gentlemen from all parts of the State signed the roll, and much enthusiasm was displayed. The following officers were elected: President, Dr. H. D. Didama, of Onondaga County; Vice-Presidents, First District, Dr. J. Mortimer Craw, Jefferson County; Second District, Dr. Tabor B. Reynolds, Saratoga County; Fourth District, Dr. B. L. Hovey, Monroe County; Fifth District, Dr. N. C. Husted, Westchester County; Recording Secretary, Dr. Caleb Green, Cortland County; Corresponding Secretary, Dr. E. D. Ferguson, Rensselaer County; Treasurer, Dr. John H. Hinton, New York County; Advisory Council, Drs. John P. Gray, Conant Sawyer, J. W. Moore, Thomas Wilson, Ely Van de Warker, Frederick Hyde, M. W. Townsend, E. M. Moore, E. R. Squibb, Austin Flint, Jr., and J. W. S. Greeley. The Association will next meet in New York on the third Tuesday in November, 1884.

— The New York State Veterinary Association met at Cooper Institute, New York, on the 6th of February, and completed its organization by electing the following officers: President, Dr. Robert R. W. Finlay; Vice-President, Dr. L. V. Plageman; Secretary, Dr. Halloway; Treasurer, Dr. Middletown, of Fishkill. The object of the Society is the elevation of veterinary science, and its membership is now about sixty.

— The act prohibiting the manufacture of cigars in tenement houses (except on the ground floor), which went into force in October last, has been decided by the Court of Appeals to be unconstitutional. In the case in which its constitutionality was tested, it was claimed by counsel that on the face of the bill it was shown that the business was not considered by the Legislature to be detrimental to public health, because the law allowed it to be carried on upon the ground floor, and what was unhealthful up-stairs could not certainly be less so on the lower floor. In addition to the claim that the law was unconstitutional, it was urged that the making of cigars in tenement houses was not detrimental to the health even of those engaged in the business, and a resolution passed by the Board of Health in January, 1883, while the bill was before the Assembly, was presented, which stated that "it is the opinion of this board that the health of the tenement population is not jeopardized by the manufacture of cigars in such houses."

— At a meeting of the New York Anthropological Society, held February 6th, the subject of mesmerism was discussed, and Dr. Jarvis related a case in which he had successfully employed it as a means for producing anæsthesia while he performed a difficult and painful operation upon the subject.

— In his annual message Mayor Edson says, in regard to the new Croton Aqueduct, that it is a source of gratification and encouragement to the Commissioners that up to this time the modified route determined upon has met with very slight opposition or objection from property owners or others, and that as soon as the surveys are completed, and the requirements of the law can be fulfilled, the commissioners will take possession of the required lands and begin the work. He thinks this will be done early in the spring, and that the aqueduct will be completed within thirty months from the date of the commencement of construction. He praises the health department for its energy and efficiency, and expresses the opinion that the remarkable healthfulness of the city during the past year is in a great degree due to the constant watchfulness of the department and to the vigorous enforcement by its officers of the sanitary laws. The number of deaths occurring in the city during the year was 33,958, a decrease of 3966 as compared with the previous year. The death-rate, in comparison with that of other large cities, he thinks is not excessive, particularly when the special circumstances existing in New York are taken into consideration, namely, the absolute completeness of the records of deaths; the large tenement-house population, due to the insular position of the city; the great foreign immigration to this part, where many aged, weak, and sickly immigrants remain to die; the influx of sick and poor from the surrounding country and from interior cities, who seek the benefits of the treatment to be obtained in the hospitals; and the great number of visitors and temporary residents always in the city for medical treatment — all contributing to swell the mortality and increase the apparent death-rate.

The mayor calls attention to the notable decrease in the number of deaths from zymotic diseases, — the number from small-pox in 1883 being twelve, against 259 in 1882; from scarlatina, 745, against 2066 in 1882; and from diphtheria, 1010, against 1525 in 1882, — and then proceeds to give a synopsis of the work performed during the year by the Board of Health in its various departments.

— The eleventh annual Commencement of the Training School for Nurses attached to Bellevue Hos-

pital was held on the 8th of January, when twenty-seven graduates received diplomas, and Prof. T. Gaillard Thomas made an address to the class, from which the following extract is taken: "The lady managers of this school have looked for and found in it a field which lay fallow at their very door, and yet a field as noble, as useful, and as consonant with woman's nature as any that civilization offers to mankind. The educated nurse is the lieutenant of the physician in the sick room, one who replaces him in his absence, watches for him the approach of danger, reports for him the progress of the case, and in time of sudden and dangerous emergencies acts for him to the best of her ability. Yet we ask you, nurses, whether this position is not a sufficiently lofty one, a sufficiently responsible one, to satisfy the ambition of any woman? Could any greater trust be imposed upon you, any greater confidence placed in you, if you were sculptor, actress, prima donna, lawyer, or physician?" The following is a summary of the annual report, which was read by Dr. Murray: The school was opened, in 1873, by thirteen women, to whom was intrusted the nursing of four wards in Bellevue Hospital. It now numbers sixty-four pupils, and has charge of 258 beds in fourteen medical and surgical wards, the Sturgis and Marquand Pavilions, and the Emergency Hospital attached to Bellevue. The school also nursed 125 private cases last year. Since its opening 105 nurses have been graduated, of whom twenty-five are engaged in hospital work, and 137 in private nursing. There were 813 calls for private nurses last year, of which 184 had to be declined, all the nurses being engaged at the time of application. Over 300 applications for entrance to the school were received, but only forty of the applicants were accepted. The expenses exceeded the receipts by $3,500, but two friends supplied the deficit. About a year ago the school was asked to furnish recruits for an association of trained nurses to be established in Rome, Italy, and on this occasion letters were read from there praising the work of the graduates sent.

Correspondence.

TREATMENT OF DISEASES OF THE EAR.

VIENNA, *January* 12, 1884.

MR. EDITOR, — Perhaps a few words concerning the treatment of diseases of the ear at the Vienna clinics may be of interest to some of your readers, and I will endeavor to mention some of the more interesting points in regard to it.

At all the clinics for simple otitis media purulenta uncomplicated by profuse granulations or polypi, after syringing and carefully drying the ear, very finely powdered boracic acid is blown in. This powder is allowed to remain until it becomes moist, when it is immediately syringed out, the ear is again carefully dried, and more powder is blown in. This should also be done by the patient at home as often as is necessary. As soon as the powder remains dry in the ear all treatment is stopped, and the powder gradually works its way out without the use of the syringe.

This treatment by means of powdered boracic acid has entirely superseded the use of astringent solutions, such as sulphate of zinc, alum, etc., which are now only used in exceptional cases where boracic acid has failed to check the otorrhœa. The results obtained seem to be very good indeed, and it is claimed that boracic acid is less irritating than the astringents, and that when properly prepared, that is to say, very finely powdered, it never forms hard masses in the ear which will act as foreign bodies, and so have to be removed. The best method of obtaining boracic acid of the proper quality is by precipitating it from a solution.

For cases complicated by granulations which are too small to be removed by the snare, and in the cases of children or adults who are frightened at the idea of being operated upon, spiritus vini rectificatissimi is used. The ear is to be filled with this fluid three times a day, and the alcohol is allowed to remain for from twenty minutes to half an hour, the patient in the mean time lying with his head upon a pillow. If alcohol in its full strength causes pain it should be diluted at first, and its strength increased gradually. Alcohol may be combined with the boracic acid treatment or it may be used after the removal of polypi by the snare. Larger granulations and polypi are removed by means of the snare, the sharp ring, or are touched with caustic.

Ferrum sesquichloridum is recommended as a caustic at all the clinics. It is better than nitrate of silver as it causes less pain and penetrates deeper into the tissues to be removed, and so accomplishes its object more quickly.

Urbantschitsch considers chromic acid, in its most concentrated form, the *very best caustic* to use for polypi or granulations, but it must always be applied through a speculum, and must not come in contact with healthy tissue, as when it does so it causes great pain. If granulations bleed after being touched with chromic acid a tampon of cotton wool must immediately be inserted in order to keep the acid from coming in contact with the walls of the external canal.

For tough fibrous polypi Urbantschitsch uses the galvano-caustic snare.

For both acute and chronic catarrh of the middle ear, besides the use of the air douche, catheter, etc., if the calibre of the Eustachian tube is diminished, bougies are passed through a catheter to the isthmus tubæ, and the canal is dilated up to the size of one and one third millimetres. In some cases these bougies are allowed to remain twelve hours in a ten per cent. solution of nitrate of silver, and then dried before being used. The ordinary bougies remain in the Eustachian tube about three minutes; those which have been soaked in nitrate of silver from a half a minute to a minute; but in any case if they cause sharp pain they are immediately withdrawn. Besides dilating the Eustachian tube they often act favorably in removing troublesome tinnitus, and it is not uncommon to find that after their use in one ear tinnitus of both ears is improved or ceases altogether. By reflex irritation of the acousticus through their use the hearing is also often improved, but it is doubtful how permanent this improvement is.

Another method employed to mitigate tinnitus, which is often so annoying, is the use of electricity. The constant current is at first tried, and if this fails to accomplish the desired end the induced current is used.

The anode (copper pole) is placed upon the tragus, and the kathode (zinc pole) is brought in contact with

some other part of the body, usually the side of the neck, or the hand. A very weak current is at first applied, and its strength is gradually increased, until the patient feels a sharp stabbing pain in the ear, or has severe tinnitus; the strength of the current is then gradually diminished, until it is once more at zero, *before removing the poles.*

The improvement due to electricity is sometimes permanent, — often only temporary, — and in some cases it has no effect upon the tinnitus.

But even in these last cases it often relieves the dull, stupid feeling in the head, loss of memory, etc., complained of by these patients; and in this way greatly improves their condition.

Electricity is also very often used by Urbantschitsch for otalgia, and gives very good, and in many cases permanent, results. For all recent cases of deafness due to labyrinthine disturbances, whatever the primary cause may have been, Politzer tries the subcutaneous injection of a two per cent. solution of the muriate of pilocarpine. He injects four drops at first, and gradually increases the dose to ten drops daily. He gets fairly good results in about one half of the cases.

I have seen three cases of persons totally deaf, who, after being treated in this way, could hear and understand loud speech spoken at the distance of a few inches from the ear; and Politzer has had one case of perfect recovery of the hearing after it had been absent for three years, and several other very satisfactory results, following the use of this drug. He is about to publish the results of his experiments, with the history of some of the cases. It is not known how pilocarpine acts in these cases, but the benefit derived from its use is certainly great in some of them.

It is considered here a part of the otologist's duty to examine and treat the nose and pharynx, to remove adenoid vegetations if they are present from the posterior nares, to cauterize the mouth of the Eustachian tube, etc.

For nasal polypi the ordinary snare, or the galvano-caustic snare, is used. For adenoid vegetations at the posterior nares the galvano-caustic snare, or Stoerk's snare constructed for this purpose, is employed to remove the growths, or else they are repeatedly touched with nitrate of silver, burned with the galvano-cautery, pulled off with forceps, or scratched out with the finger nail. In every case where the nose is found to be diseased, it is treated at the same time with the ear, and this is considered a very important aid to the treatment of the ear itself.

It is of course impossible within the limits of a letter, to do more than mention a few points in the treatment of diseases of the ear, and I hope that these may prove of interest to those of your readers who are otologists.

I remain, very truly yours,

H. L. Morse, M. D.

"PRECAUTIONS AGAINST CHOLERA."

Mr. Editor, — As an earnest inquirer, permit me to seek through the columns of the Journal answers to one or two questions suggested by a paragraph now going the rounds of the newspapers, entitled, "Precautions against Cholera."

(1.) Was there ever an authenticated case of cholera unmistakably introduced into this country by rags brought from abroad for manufacturing purposes?

Before the appearance here of cholera, half a century ago, and since, our best physicians preached and taught that it was non-contagious, and greatly calmed the fears of the people by their doctrines. "The history of cholera in our country," says one of the ablest of them, "has confirmed the correctness of these views." At any rate cordons have not been resorted to; segregation of the sick not insisted on. Instances there have been where the well have mingled with those attacked, even to the occupying the same bed with the dying, or one from which the dead had but just been taken. Often the clothing of the affected has been used promiscuously, without cleansing, by the family or the attendants. The dead have been buried, not hurriedly, in secret, but openly as usual; occasionally with public ceremonies in church, exposed there to the unrestrained view of friends and curious spectators, numbers of physicians standing by, and unconcernedly looking on. If any harm ever resulted from such procedures it has not been brought to light, or put any restraint on the free intercourse of the people.

(2.) If rags can carry cholera from one country to another, is there any known method, application, or process, whereby this baneful property when once acquired can be destroyed, — a *known*, not a theoretical, method?

Last year there was cholera in Egypt; and Egyptian ("cholera") rags brought to this neighborhood were unloaded in Boston Harbor, watered down with a medicated liquid, and then returned to the owners. What was the material so potential that applied superficially, penetrated and permeated the compressed bales, and deprived them of baneful power?

(3.) Apparently, however, not content with last year's methods, the government, according to the newspapers, proposes to carry on a cleansing process on its own account in Egypt itself, and the Boston Board of Health readily yields and gives the "action contemplated" its "hearty welcome." The Board says: "The rags being subjected to the boiling proposed (the newspapers do not tell what the "boiling proposed" may be), or to the action of confined sulphuric (sulphurous?) acid gas for six nours, burning one and a half to two pounds of roll brimstone in each one thousand cubic feet of space, with the rags well scattered upon racks, will be satisfactory to us."

Well, suppose all this practicable, ignorant people not unnaturally ask whether disease can be boiled out, and whether there is, in fact, any infection-destroying power in the fumes of burning brimstone? Moreover, if infection previously pervaded the rags, why may it not return to them when the pestilent air of Egypt, through and by which they originally acquired this infection, is again let in upon them before they are sufficiently dried or prepared to be baled up for transportation?

There would seem, Mr. Editor, to be a good deal of mistiness, if not of mistery, in such "precautions," as if coming *dark ages* cast their shadows before, and were already spreading their nebulous edges over the land. But outsiders should hold their peace until better informed. In the hope of further enlightenment the foregoing questions are tentatively asked.

Inquirer.

— In Vienna, in 1882, there were 16,605 births in wedlock, and 12,657 illigitimate.

Miscellany.

A NEW METHOD FOR THE DETECTION OF THE BACILLUS TUBERCULOSIS.

DR. HARTZELL, in the *Philadelphia Medical Times* (January 26th) describes a new method for discovering the bacillus, which he claims has advantages over most of those hitherto in use. It is as follows: —

A small quantity of sputum is spread as thinly and evenly as possible upon an ordinary glass slide; it is allowed to dry, which takes but a minute or two, and is then passed slowly several times through the flame of an alcohol lamp or Bunsen burner. One or two drops of the fuchsin solution, recommended by Gradle, and prepared as follows, — carbolic acid, fifteen minims; distilled water, one half fluid ounce; dissolve, and add saturated alcoholic solution of fuchsin, one half fluid drachm, — are placed upon the sputum thus prepared, and allowed to remain from three to five minutes. The slide is now washed thoroughly with distilled water, to remove the excess of fuchsin, and the stained sputum completely decolorized by means of a saturated solution of oxalic acid. It is again thoroughly washed in distilled water, after the decolorization, and allowed to dry; it is now ready to be mounted in glycerine or balsam for examination. With a power of five hundred or six hundred diameters the bacilli will appear as brilliant red rods, no staining of the background being necessary.

One chief advantage claimed over other methods is that in the latter the decolorizing agent employed is dilute nitric acid; but this, besides being disagreeable to handle because of its corrosive and staining properties, is apt to remove the color from the bacilli too, unless great care is taken. Oxalic acid, however, seems to leave the dye untouched in them.

THE LATE DR. CALVIN ELLIS.

AT a meeting of the Medical Faculty of Harvard University, held February 2, 1884, the Dean, Dr. H. P. Bowditch, presented the following tribute to the memory of the late Dr. Calvin Ellis, prepared at the request of the Faculty by Dr. O. W. Holmes, and it was voted to enter the same on the records of the Faculty, and to transmit copies to the sister of the deceased, and to the editor of *The Boston Medical and Surgical Journal* for publication: —

For nearly a quarter of a century Dr. Calvin Ellis has been connected with the Medical School of Harvard University. He had been recognized while a student as a young man of great promise, endowed not only with superior abilities but with the sterling elements of character which enable those who know the student to predict his future success with no misgivings.

He began early his professional life, giving his especial attention to the subject of morbid anatomy, following in the steps which had marked the long and patient career of our lamented friend, the late Dr. James Jackson. This branch of science involves great labor and self-sacrifice, and repays them with an exact knowledge of the nature and course of disease not to be obtained by any easier method of study. His devotion to this arduous pursuit laid the foundation in science of the skill which he carried into the art of healing, and of his success as a teacher of pathology and of clinical medicine.

Dr. Ellis took an active and never flagging interest in all that related to the administration of the Medical School of the University. He had a special care for the microscopic department, which was largely developed under his influence, and for the use of which he made a gift in 1872 of five hundred dollars. From 1869 to 1883 he was dean of the Medical Faculty, and discharged all the duties of that office with the fidelity which he carried into whatever he undertook. It is now several years since he began to suffer from the disease which caused his death. Even after this disease had greatly impaired his active powers he would still attend the meetings of the Faculty, and when at length he was missed from his usual place those who knew him felt that he was doomed, for no less than some imperative hindrance could keep him from being with them.

His long period of suffering bravely borne has at last come to an end, and he has left us to mourn the loss of a precious life cut off in the midst of its usefulness. Of that diligent, faithful, honorable life this Faculty has reaped some of the best fruits. His memory will always be gratefully cherished by those who have been associated with him in the work of medical education, and they leave on record for those who come after them this affectionate tribute to the virtues and talents of their able, upright, noble-hearted colleague and friend.

SOME SURGICAL USES OF COLLODION.

MR. SAMPSON GAMGEE, in the *Birmingham Medical Review* (January, 1884), mentions some uses of this therapeutic agent which he thinks is not in general sufficiently appreciated or utilized. He remarks, that being composed of ether, gun-cotton, and spirit, collodion is a powerful anti-putrescent; and, by ready evaporation and contraction, it exercises the dual antiphlogistic power of refrigeration and compression.

In acute orchitis he knows no plan of treatment so simple, rapid, and satisfactory, as coating the cord and scrotum with layers of collodion, by the aid of a camel-hair brush previously dipped into it. The sensation is momentarily sharp, the shrinkage rapid, and so is the subsidence of the inflammatory process.

To swollen parts which cannot well be bandaged, collodion is especially applicable for the compression attending its contraction. The author was consulted in the case of a good looking boy considerably disfigured by a red and swollen nose, which became very pale and visibly contracted just after being painted with successive layers of collodion. The application was repeated three times in the succeeding fortnight, with the effect of producing shrinkage of the organ to its natural size and color.

When the nasal bones are fractured, Mr. Gamgee recommends as a very effective mould for keeping them immovable, after adjusting them with the fingers, the following: Place over the nose a thin layer of absorbent cotton soaked in collodion; as it dries another layer of cotton and more collodion, taking care that the application extends sufficiently on each side to give buttress-like support. The patient compares the feeling to the application of a firm bandage on the nose, and the bones consolidate effectively under the shield, which may be renewed as it cracks and peels off.

In the dressing of fresh wounds, the author speaks

highly of the same agent, to be applied after thoroughly drying the surface. Its effect is also good when applied in other than fresh wounds, as in a case cited where a man had suffered for ten days from a wound of the shin inflicted by a carriage-step. Water dressing had been applied continuously, and the surface of the sore had suppurated, and its edges for some distance around were red and tender. The limb was raised to empty it of blood, dried with an absorbent, and painted with collodion, then bandaged, and cicatrization was perfect in four days, the patient having sustained no interruption of his use of the leg.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 2, 1884.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diphtheria and Croup.	Typhoid Fever.	Scarlet Fever.
New York	1,206,590	584	210	14.28	16.32	4.76	.68	2.22
Philadelphia	846,984	463	166	19.58	14.96	4.18	3.96	7.48
Brooklyn	566,689	220	77	13.65	21.37	4.10	4.55	2.77
Chicago	503,304	200	82	18.30	12.20	3.00	6.50	3 50
Boston	362,535	172	52	17.40	13.34	3.48	1.74	5.22
St. Louis	350,522	157	62	23.68	10.88	12.80	1.28	1.28
Baltimore	332,190	160	62	12.60	16.38	7.56	1.89	.63
Cincinnati	255,708	97	28	14.42	13.39	2.06	5.15	—
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	113	43	20.24	20.24	3.52	—	4.44
Pittsburg (1883)	175,000	59	20	18.59	18.59	6.96	5.07	1.69
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee	115,578	32	15	25.04	6.26	9.39	3.13	9.39
Providence (1883)	116,755	29	10	24.15	3.45	17.25	3.45	—
New Haven (1883)	73,000	30	7	16.66	16.66	3.33	3.33	3.33
Charleston	49,999	29	8	13.80	13.80	—	6.90	—
Nashville	43,461	19	9	5.26	—	—	5.26	—
Lowell	59,485	29	11	24.15	3.45	10.35	3.45	3.45
Worcester	58,295	25	10	20.00	4.00	8.00	—	—
Cambridge	52,740	21	9	9.52	19.04	4.76	—	—
Fall River	49,006	16	5	26.66	13.33	12.50	—	—
Lawrence	39,178	15	4	20.00	20.00	—	6.66	—
Lynn	38,284	14	4	—	14.28	—	—	—
Springfield	33,340	13	1	15.38	15.38	7.69	—	—
Salem	27,598	14	3	—	21.42	—	—	—
New Bedford	26,875	13	4	—	23.07	—	—	—
Somerville	24,985	8	1	—	14.28	—	—	—
Holyoke	21,851	10	3	10.00	—	10.00	—	—
Chelsea	21,785	5	1	—	40.00	—	—	—
Taunton	21,213	7	0	—	28.56	—	—	—
Gloucester	19,329	2	1	—	—	—	—	—
Haverhill	18,475	—	—	—	—	—	—	—
Newton	16,995	2	1	—	50.00	—	—	—
Brockton	13,608	4	2	—	25.00	25.00	—	—
Newburyport	13,537	4	1	—	—	—	—	—
Fitchburg	12,405	3	0	—	33.33	—	—	—
Malden	12,017	4	1	—	25.00	—	—	—
Seventy-four Massachusetts towns	311,864	51	9	9.80	31.36	9.80	—	—

Deaths reported 2624 (no reports from New Orleans and Buffalo): under five years of age, 922: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 388, lung diseases 455, consumption 405, diphtheria and croup 141, typhoid fever 54, scarlet fever 44, measles 40, diarrhœal diseases 25, erysipelas 23, cerebro-spinal meningitis 17, malarial fevers 13, puerperal fever 15, whooping-cough 13, small-pox two, typhus fever one. From *measles*, New York 13, Philadelphia 10, District of Columbia nine, Brooklyn seven, Boston one. From *diarrhœal diseases*, New York six, Boston four, Philadelphia and Brooklyn three each, St. Louis, Cincinnati, and New Haven two each, Baltimore, District of Columbia, and Milwaukee one each. From *erysipelas*, New York seven, Philadelphia, and Boston three each, Brooklyn, Chicago, St. Louis, Cincinnati, and Charleston two each, District of Columbia one. From *cerebro-spinal meningitis*, Worcester three, New York, Chicago, Cincinnati, and Lowell two each, Boston, Fall River, Springfield, Salem, Holyoke, and Brockton one each. From *malarial fever*, New York and St. Louis four each, Brooklyn and Baltimore two each, Chicago one. From *puerperal fever*, New York, Chicago, and St. Louis three each, Boston two, Providence, Cambridge, and Philadelphia, one each. From *whooping-cough*, New York four, District of Columbia three, Chicago two, Brooklyn, Boston, St. Louis, and Fall River one each. From *small-pox*, St. Louis and Cincinnati one each. From *typhus fever*, Philadelphia one.

Seven cases of small-pox were reported in St. Louis; scarlet fever 47, diphtheria 30, typhoid fever four, and measles three in Boston; scarlet fever seven and diphtheria three in Milwaukee.

In 92 cities and towns of Massachusetts, with an estimated population of 1,319,769 (estimated population of the State 1,922,530), the total death-rate for the week was 16.59 against 17.78 and 20.00 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending January 19th, the death-rate was 20.7. Deaths reported 3479: acute diseases of the respiratory organs (London) 395, whooping-cough 117, scarlet fever 108, measles 100, fevers 61, diphtheria 28, diarrhœa 27, small-pox (Sunderland six, London five, Birmingham and Liverpool four each) 19. The death-rates ranged from 11.3 in Wolverhampton to 26.7 in Manchester; Bradford 17.2; Nottingham 18.8; Newcastle-on-Tyne 19.3; Leeds 19.8; Birmingham 20.3; London 20.5; Liverpool 20.7; Leicester 22.8; Sunderland 23.3; Sheffield 25. In Edinburgh 20.3; Glasgow 26.1; Dublin 26.9.

The meteorological record for the week ending February 2d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date. Jan.–Feb., 1884.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean	Maximum	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 27	30.627	18	24	13	82	66	70	72	NW	NW	NW	16	6	5	C	C	F	—	—
Mon., 28	30.437	21	26	13	71	76	88	78	NW	NW	N	4	6	24	O	O	O	—	—
Tues., 29	30.276	23	28	15	91	82	93	88	NW	NW	NW	8	7	3	O	S	O	—	—
Wed., 30	29.928	32	38	20	54	100	100	84	NW	SW	S	4	8	18	H	O	R	—	—
Thurs., 31	29.551	41	45.5	37	94	87	93	91	SW	S	SW	14	6	8	O	O	O	—	—
Fri., 1	29.779	30	42	17	100	58	70	76	SW	NW	NW	4	24	12	R	F	C	—	—
Sat., 2	30.121	25	32	14	83	56	67	68	NW	SW	SW	1	10	9	F	O	C	—	—
Mean, the Week.	30.104	27	45 5	13				80										40.25	.68

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., Lt. snow; R., rain; T., threatening.

RESOLUTIONS ON THE LATE DR. GEORGE C. LAWRENCE.

THE following resolutions were unanimously adopted at the meeting of the Berkshire District Medical Society, held at Pittsfield, January 30, 1884: —

Whereas, It has seemed best to the Supreme Ruler to remove from our midst our brother, George C. Lawrence, of North Adams.

Resolved, That while we bow with submission to the Divine will, we still in the death of our beloved brother deplore the loss of an earnest and faithful physician, temperate and true in his professional obligations, towards his brethren courteous and honorable, while progressive, not radical, thoroughly loyal and sincere in his professional work.

Resolved, That we tender to his family our sincere sympathy in their sudden loss of a kind and faithful husband and father, and to the community in which he practiced of a laborious, studious, and self-sacrificing physician.

Resolved, That a copy of these resolutions be sent by the Secretary of this Society to the family of our deceased brother, and to the papers of North Adams, *The Boston Medical and Surgical Journal*, and also be placed on the records of this Society.

A. M. SMITH, Williamstown,
H. M. HOLMES, Adams,
H. J. MILLARD, No. Adams,
N. S. BABBITT, No. Adams,
A. M. SMITH, Pittsfield.
} *Committee.*

DEATHS.

DIED, in Pittsfield, Mass., February 6th, Almon N. Allen, M. D., aged sixty-three. He was a native of Petersburg, N. H., a graduate of the Albany Medical College, and had practiced in Pittsfield over thirty years. He was a member of the Massachusetts Medical Society since 1861. He leaves a widow, and a son, who is a physician in Brooklyn.

Died, in Great Barrington, Mass., February 5, 1884, Noble Bennett Pickett, M. D., M. M. S. S., aged eighty-three years.

A BILL TO PREPARE AND PUBLISH A NATIONAL PHARMACOPŒIA FOR THE UNITED STATES.

IN the House of Representatives, January 8, 1884, Mr. Randall introduced a bill, as follows, to prepare and publish a national pharmacopœia for the United States, which was referred to the Committee on Ways and Means: —

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled: —

That the Secretary of the Treasury shall, as soon as practicable, detail two officers of the Marine Hospital Service, and the Secretary of War shall detail two officers of the Medical Staff of the Army, and the Secretary of the Navy shall detail two officers of the Medical Staff of the Navy, for the duty of compiling and preparing a pharmacopœia, which shall be known as the National Pharmacopœia of the United States of America, and shall be held and accepted as the standard for the purveying, compounding, and dispensing of drugs or medicinal agents, and shall be taken as authority in the Treasury Department on all questions arising under the tariff laws of the United States with regard to the nomenclature, description, and purity of drugs or remedial agents, and shall further be received as evidence in the United States courts. And the matters contained in the said pharmacopœia shall be free for use by all authors and commentators for the benefit of the medical and pharmaceutical professions and of the community at large; and it shall not be lawful for any one to reprint and publish the said pharmacopœia as a whole.

SECT. II. That the medical officers detailed as above provided shall invite the American Medical Association and the American Pharmaceutical Association, at their next annual meetings, to form committees of not more than three members from each of the said Associations, which committees, if so appointed, may coöperate with the above-named medical officers in the preparation of the said pharmacopœia, forming a board which shall have power from time to time to add to its number as may in its judgment be necessary, and which shall elect a chairman and a secretary, and adopt such rules as it shall see fit for the expediting and perfecting of the said pharmacopœia, which, when completed, shall be printed under the supervision of the said board; and an edition of not less than five thousand copies shall be printed for use in the several departments of the government of the United States; and copies may be furnished to private persons in accordance with the provisions of section thirty-eight hundred and nine of the Revised Statutes.

SECT. III. That for the purpose of defraying the necessary expenses of preparing the said pharmacopœia the sum of five thousand dollars is hereby appropriated out of any moneys in the treasury not otherwise appropriated, and the same shall be disbursed under regulations to be prescribed by the Secretary of the Treasury.

SECT. IV. That the said pharmacopœia shall be revised once in ten years, upon the plan embodied in this Act.

THE WINTER CLIMATE OF NEWPORT.

AT a regular meeting of the Newport Medical Society, held February 5th, at which twelve members were present, it was

Resolved, That the Newport Medical Society indorses the opinion advanced by Dr. H. R. Storer, that the winter climate of Newport is preferable to that of the rest of New England for certain forms of pulmonary diseases, and for general invalids, provided that when here the patients are under proper hygienic conditions as regards location, etc.

THATCHER GODDARD, M. D., *Secretary.*

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING FEBRUARY 9, 1884.

VAN REYPEN, W. K., surgeon, from the U. S. S. Powhatan, to the Navy Department as assistant to the Bureau of Medicine and Surgery, and acting chief of that Bureau.

HOEHLING, A. A., surgeon, from special duty at Washington to the Powhatan.

Original Articles.

ON THE TREATMENT OF ACUTE PNEUMONIA.[1]

BY FRANCIS MINOT, M. D.

Notwithstanding the great improvement which has gradually taken place in the treatment of acute pneumonia during the last thirty years, I think it is not yet so perfect as our knowledge of the pathology and course of the disease should lead us to expect. Although the belief that it is essentially an inflammatory disease is fast disappearing, the traces of the mode of treatment founded on that theory still remain. It is true, we do not often bleed our patients, nor give them tartar emetic, nor purge them actively; but it is not uncommon to see extensive blisters applied to the chest, and aconite, veratrum, and other sedatives are given with a view of diminishing the rate of the pulse, and thereby, it is argued, of reducing the inflammation, while, strange to say, nourishment and stimulants are freely given at the same time to support the strength. It is only recently that the notion of the infectious nature of pneumonia, first maintained, I believe, by Juergensen, of Tübingen, began to be accepted by well educated and experienced physicians, and it is natural that the traditions of a former generation, which believed in its essentially inflammatory character, should still prevail among us. If it were more generally known that the disease is self-limited and infectious, as much so as measles or variola, and that it is rarely if ever fatal in healthy subjects, a more rational treatment would be substituted for the complicated and frequently contradictory one so often seen employed.

For the sake of convenience I will divide the subject of the treatment of pneumonia into three sections. The first section relates to cases occurring in healthy persons, without distinction of ages. The disease is almost never fatal, and rarely attacks both lungs. The initial stage of the fever occupies from twenty-four to forty-eight hours; the fastigium, during which the temperature does not rise above 104° F., usually lasts seven days, at the end of which time the temperature suddenly falls to the normal point, or a little below it, the crisis occupying one, two, or rarely three days. (See the Charts Nos. 4, 5, and 6.) The ratio between the rate of the respiration and that of the pulse (normally, one to four and a half) is not greater than one to three. There is but little appetite, and in young children usually none. An experience of many years in hospital and private practice has convinced me that these cases always do well without any special treatment, medicinal or dietetic. Sometimes an anodyne (Dover's powder or morphia) or a sedative (bromide or chloral) is useful to relieve pain or restlessness, or the solution of the acetate of ammonia may be given if the skin be hot and dry. As much water, not iced, should be allowed as the patient desires for drink. External applications are not needed, and all irritating epithems should be avoided, since counter-irritation only adds to the patient's suffering without modifying the self-limited process usually considered as "inflammation" of the lung. I am decidedly opposed to the application of poultices to the chest, especially "jacket" poultices. The fatigue and exposure caused by their frequent changing, and by their removal for the purpose of auscultation and percussion, are injurious; they are uncleanly, and possess no advantage, in my opinion, over a woolen jacket or waistcoat, or still better, one extemporized out of a sheet of wadding (not batting), to satisfy the prejudices of the patient's friends, who are too often, as in other cases, unconsciously his enemies. I would plead for little children, who like nothing so well as to be left undisturbed by officious ministration, requiring no nourishment beyond a little milk, with water at discretion. When the crisis comes food is readily taken.

If possible, the patient should lie on a single bed, so as to be easily handled by the nurse and physician. His clothing should be no heavier than is agreeable to him. Fresh air should be constantly admitted to the room, and a fire should be kept burning in the fireplace day and night, except when the weather is warm enough for open windows.

As to diet, the patient should not be urged to take more food than he likes. It is a common idea that he is in danger of sinking from exhaustion, and must be sustained by being constantly crammed with beef tea, milk, gruel, etc. In reality very little food is necessary during the short period of the acute stage, and nature declines to digest more than a small quantity, frequently rejecting from the stomach what has been swallowed. In the case of children, particularly, I have observed that there is a strong objection to taking nourishment, and that when this instinct is respected the patient does perfectly well; as soon as the temperature falls he asks for food. But I find great difficulty in making parents and nurses believe this, owing to a natural application of the modern supporting treatment, so useful in typhoid fever and other exhausting diseases, to acute and transient affections.

The second class of cases of pneumonia include those occurring in healthy subjects who are debilitated from various causes, such as old age, overwork, previous illness, etc. They are free from cachexia, and under appropriate treatment the majority recover, but the prognosis is much more doubtful than in the preceding class. The disease is apt to extend from one lung to the other (though this is by no means always fatal), the temperature falls more gradually than in uncomplicated cases, and convalescence is often more prolonged. The treatment should not, in my opinion, differ materially from that just described, except that alcohol is usually required, and digitalis is necessary if there should be signs of pulmonary obstruction from failure of the heart's action. Champagne usually agrees very well, but any other stimulant, if preferred by the patient, will answer. Brandy and carbonate of ammonia must be given when there is much exhaustion.

The third class of cases comprise those which occur in cachectic individuals. The great majority of the patients die, whatever treatment be adopted. They are generally intemperate, or are victims of chronic renal disease, or they are tuberculous; but patients already prostrated by grave acute disease, such as typhoid fever, variola, bronchitis, etc., although otherwise previously healthy, when attacked by pneumonia may also be unable to resist the intercurrent disease. The stage of hepatization is succeeded by purulent infiltration, and sometimes by gangrene, and death follows from asphyxia and exhaustion, usually with very high temperature, though sometimes without much elevation, as happened in two of the cases which I shall report. (See the Charts No. 7 and No. 9.) In these cases

[1] Read before the Boston Society for Medical Improvement, February 10, 1884.

stimulants should be freely given; large doses of brandy are easily borne, and sometimes appear to save life. Nourishment in liquid form is also required, but seems less important than alcohol. External applications, those at least which require frequent changing, should be avoided, as the patient has no strength to spare.

The following cases, appended in illustration of the above remarks, were treated by me in the Massachusetts General Hospital, during the latter part of the winter and spring of 1883:—

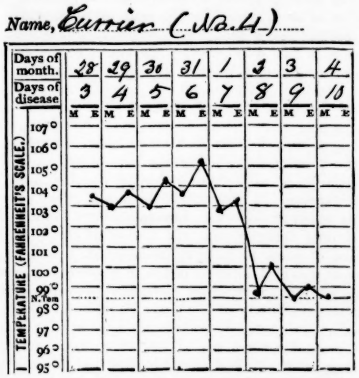
CASE I. Ellen Egan, forty-six, single, domestic. She had had rheumatic fever eighteen and ten years previously; otherwise her health was good. Entered January 2, 1883. Two days previously she had a chill, followed by pain in the left side, cough, and brownish expectoration. There was considerable dyspnœa. Temperature 103.5° F., pulse 110, respiration 40; adhesive, rusty-colored sputa; no cardiac murmur; signs of solidification in lower portion of left lung. On the third day after entrance physical examination showed almost complete solidification of the left lung; respiration 52, and labored; face dusky, cheeks deeply flushed; pulse 124. The temperature, however, was only 102° F. (Carbonate of ammonia, brandy.) From this time the symptoms gradually improved, and on January 13th, eleven days after entrance, and thirteen from the beginning of the attack, she was convalescent. Discharged January 31st, four weeks after entrance. This case would come under the second class. The patient was of a healthy constitution, but was probably exhausted by hard work and the unfavorable hygienic conditions to which domestics are often subjected. The pulmonary congestion was relieved by stimulants, and she recovered after an illness of moderate duration.

CASE II. Tim. Murphy, twenty-nine, good general health and family history. Pneumonic seizure six days before entrance. Entered January 4, 1883; pulse 94, temperature 101° F., respiration 30. Cough; rusty, adhesive sputa. On the third day after entrance temperature was 103.4° F.; the next day 99.8° F., and it gradually fell till the eighth day after entrance, when it became normal. Repeated examinations of the chest were made, but nothing abnormal was ever found. The urine showed a trace of albumen. He took no stimulants, and no medicine, except a little of the solution of acetate of ammonia. He was discharged, well, January 26th, twenty-two days after entrance. This case was one of the mildest sort. The disease was probably central, and so escaped observation by physical signs, but the history, the temperature, the expectoration, etc., were enough to establish the diagnosis. No treatment was required or given.

CASE III. J. Avery, forty-one years, mariner, entered January 17, 1883. General health and family history good. Two days before entrance he had a chill, followed by pain in left side and back, increased by long breath, cough without expectoration, headache, and pain in limbs. Temperature 103° F., pulse 112, respiration 32. No râles and no friction sounds were heard. Two days after entrance the temperature was normal, there was a little bloody expectoration, and evidence of consolidation at the left apex. On the 23d he had an attack of tonsillitis, lasting a few days, but on the 31st all his symptoms disappeared, and he was discharged, well, fourteen days from his entrance.

It is not certain whether this really was a case of pneumonia, though so entered on the hospital books. There was evidently a pleuritic complication, and possibly a tubercular deposit in the left apex. The treatment consisted in fomentations to the chest, Dover's powder, and spirit of nitrous ether. For the tonsillitis cold applications to the throat, with an astringent gargle, were ordered.

CASE IV. William Currier, twenty-six years, horse-car conductor, American. One sister died of consumption.



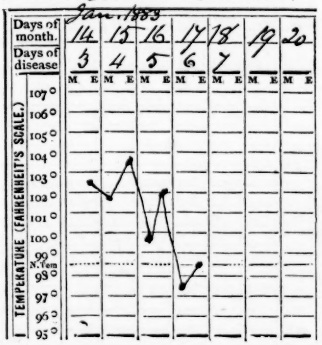
He had always been well, and had had no unusual exposure to cold or wet. Entered January 28, 1883. Two days previously he had a chill, with pain in every part of the body, but especially in the right side of the chest, where it was increased by deep inspiration or cough. There was dyspnœa, cough, reddish, sticky, expectoration, a little nausea and vomiting, and debility. Temperature 103.4° F., pulse 130, respiration 28. Dullness and fine crepitation in lower part of right chest, behind and at the side. The temperature fell to normal between the evening of February 1st and the morning of February 3d, — six and one half degrees. He then improved rapidly, and was discharged, well, February 9th, twelve days after entrance, and on the fourteenth day of the disease.

The temperature curve (Chart No. 4) will be seen to be typical. For treatment he had at first hot fomentations, with Dover's powder. February 1st he was ordered four drops of tincture of aconite every four hours with an ounce of whiskey. I do not think I could have been responsible for this strange combination, which may have been directed through inadvertence by the house pupil. The aconite evidently did no harm, but probably no good either.

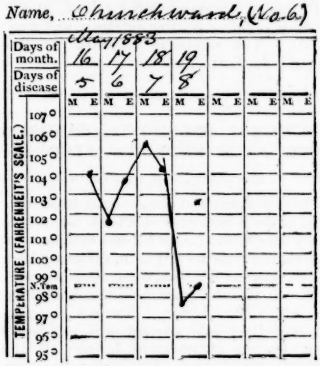
CASE V. Michael O'Connor, twenty years, laborer, landed in Boston, from Ireland, May 6, 1883, well. On the 9th he had headache, vomiting, cough, and dyspnœa, but there was no definite history of chill. He entered the hospital May 14th, with a temperature of 102.2° F., pulse 100, respiration 32. Face flushed, dullness, and bronchial respiration in lower third of left lung, and a limited area of fine crepitant râle. Sputa orange-colored, tenacious, and scanty. The following evening the temperature rose to 103.4° F., the highest point; then, in forty-eight hours, it fell to 97.5° F., and convalescence began. He was discharged, well, June 2d, nine days after entrance, and twenty-four days from the first symptoms. The treatment consisted in

Dover's powder, an occasional opiate for his cough, and whiskey.

This patient entered just at the end of the second stage, the most fortunate moment for a favorite remedy, for the change was sure to follow whatever should be given, or, as in this case, if nothing were given.

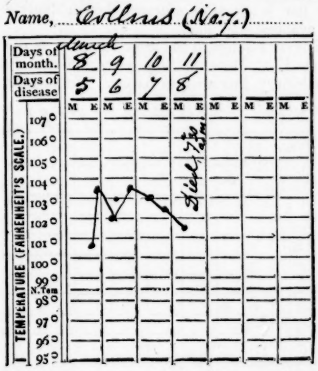


CASE VI. James Churchward, born in the Isle of Jersey, thirty-two years, married, coachman. One brother died of consumption. Health always good; habits good. May 11th, after exposure to wind while driving, chilly sensations; next day sharp pain in left side, increased by drawing long breath, slight cough, and bloody expectoration. He entered May 16, 1883; temperature 104° F., pulse 106, respiration 36. There was a soft, direct aortic murmur, propagated into the carotid; also a soft diastolic murmur, in the same place, extending downward and across towards apex. Dullness in lower half of left back, with abundant fine crepitant râle. Expectoration brownish, adhesive, and scanty. On the 18th the temperature was 105.2° F. In twenty-four hours it fell to 97.8° F., a difference of 7.4° F., and convalescence began. Abundant friction sounds were heard in the left back and side after the pneumonic resolution. On the 17th the urine contained a slight trace of albumen, but no casts; chlorides diminished. June 1st he was discharged, well, sixteen days after entrance, and twenty-one days from the first symptoms. He took Dover's powder, a little morphia, the solution of the acetate of ammonia, and tincture of cinchona.



This patient entered just before the crisis, and consequently his rapid recovery might easily have been attributed to any treatment which happened to be employed. It is interesting to note that neither the condition of aortic insufficiency, perfectly compensated, indeed, nor a family history of consumption, had any unfavorable effect upon the course of his disease, which was typical. He was at first somewhat concerned because a "jacket poultice" was not applied, which he had always heard was the legitimate treatment for pneumonia. But he admitted that he was very comfortable, and on his departure expressed much gratitude for the relief he had obtained.

CASE VII. Tim Collins, sixty years, longshoreman, widower. Family history said to be good. He had chills and fever several years ago, "typhoid fever" twelve years ago, and pleurisy of the left side eight years ago. Dyspnœa on exertion, debility, and loss of appetite for a year past, but he had kept on working. March 3d and 5th, respectively, he "vomited blood," but had no other gastric symptom. He had cough for two weeks, especially at night, which increased since the 5th. No chill. Entered March 8, 1883. Temperature 100.8° F., pulse 112, respiration 30. Face flushed; heart sounds very faint. Dullness in right side, with abundant dry crepitation; slight crepitation also below left nipple; no bronchial respiration heard; copious, adhesive, orange-colored sputa. The patient was too much prostrated to bear much examination. He failed rapidly, and died early in the morning of the 11th, three days after entrance. The temperature rose to 103.8° F. on the evening of the 9th. At the time of his death it had fallen to 101.6° F. The treatment consisted in stimulants and nourishment. The autopsy showed almost complete solidification of the right lung, a small amount of hepatization in the upper front of the left lung, the lower lobe œdematous and injected, with evidence of old pleurisy of the same side. The rectus abdominalis and numerous other muscles were infested with calcified trichinæ.



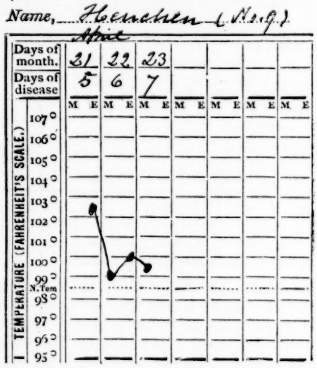
The discovery of calcified trichinæ in the muscles is interesting in connection with the history of "typhoid

fever" twelve years previously, which had been evidently mistaken for the parasitic disease. The patient, like many of his occupation, was probably intemperate, and broken down by previous disease, and the case comes under the head of pneumonia in cachectic individuals. The only hope lay in active stimulation. As is not very unusual in such cases, the temperature was moderate, at least while he was under observation.

CASE VIII. McKeon, forty-four years, laborer; of good family history; said to have been a moderate drinker. No history of previous lung trouble. April 9, 1883, he fell into a cellar, injuring his left side. Twenty-four hours later he had a chill, cough, dyspnœa, pain in the left side, and diarrhœa. Entered April 15th, having walked half a mile to the hospital. Temperature 100° F., pulse 100, respiration 50. He was cyanotic, and could not breathe lying down. There was consolidation of lower part of left lung, with coarse moist râles over both backs and fronts. Tenderness in left hypochondrium. Sputa abundant, and of a dirty-chocolate color. His condition improved somewhat after whiskey and pilocarpine were given, but a few hours after entrance he suddenly became more cyanotic, and died.

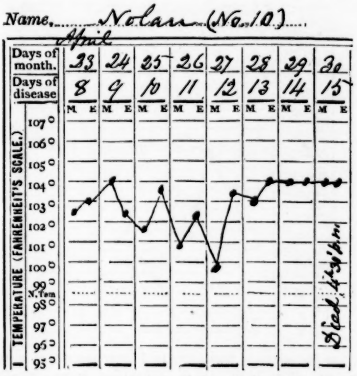
This case belongs to the same category as the last.

CASE IX. Henchy, fifty years, laborer, phthisical family history, intemperate habits. No previous lung



trouble. Five days before entrance general symptoms, with pain in the side, cough, rusty-colored sputa; no chill. Entered April 21, 1883; temperature 102.5° F., pulse 100, respiration 50. Subsultus, rapid and labored breathing, and small pulse; abundant, frothy, dark-brown sputa. Consolidation of lower lobe of left lung. The next day the temperature fell to 99° F., but the general condition was decidedly worse, and in spite of the free administration of stimulants he gradually failed, and died April 23d, the third day after entrance, and eighth of disease. (Same class as the preceding case.)

CASE X. Matthew Nolan, thirty-six years, teamster, married, said to be of intemperate habits. Entered April 23, 1883, having had a chill six days before, followed by pain in the left side, with cough and yellowish expectoration. He was much prostrated, and somewhat delirious. Temperature 102° F., pulse 96, respiration 39. Dullness, with bronchial respiration, in left front, from top to seventh rib. In upper part, also, coarse râles, and in lower fine dry râles. Corresponding signs in left upper back. Urine contained a trace of albumen; chlorides diminished; no casts. The delirium and prostration increased, and he tried to get out of bed. The temperature, which rose to 103.7° F. the day after entrance, fell gradually to



99.8° F. on the morning of the 27th (fifth day after entrance and eleventh of disease). The same evening it rose to 103.5° F., and on the following evening to 104° F., where it remained till his death, at 4.30 P. M. of the 30th, eighth day after entrance and fourteenth of disease. The treatment consisted in stimulants, opiates, and nourishment.

"INFECTIOUS" PNEUMONIA, GANGRENE OF LUNG, FETID EMPYEMA. RECOVERY.[1]

BY HENRY W. BROUGHTON, M. D. (HARV.), OF JAMAICA PLAIN.

ANYTHING which can throw light upon the vexed question of the causation of disease is important. The following case seems to have been modified by, if indeed, it did not have its origin in, defective drainage.

Mrs. S., aged twenty-nine, the mother of several children, was at time of present illness a healthy, stout woman, with a good history. She had complained for a week of a slight cold accompanied by backache and malaise. On the afternoon of January 19, 1882, she was seized with a sharp chill with subsequent fever and sweating. This was followed by a second chill during the evening, a third equally severe on the following morning, and again a fourth on the next day. Her cough meanwhile increased, while sharp pain was felt in right side, aggravated by respiration. When first seen, on third day of illness, she was in bed, breathing with difficulty because of pain. Tongue covered with pasty coat. She had a short cough, with slight, whitish expectoration. Pulse 120; temperature 102.4° F. A physical examination disclosed dullness at base of right lung behind, with explosions of fine crepitant râles at end of inspiration. No friction sounds were heard. During the following two weeks the patient experienced a severe attack of acute croupous pneumonia, which involved the middle and

[1] Read before the Norfolk District Medical Society, December 20, 1883.

lower lobes of right lung. In the first and second stage, the disease was apparently typical, with the exception of the frequent rigors at the outset. One trying and dangerous episode occurred on the fifth day, to which I ought to allude, as it nearly terminated the case. Pain in the side was a distressing and prominent symptom.

A mixture containing tr. verat. viridis, tr. opii and nitre failed to control pain. I therefore felt obliged to order morph. sulphat., one fourth grain, in pill, to be repeated in three hours if there was no relief. On the next morning I found that the nurse, usually efficient and intelligent, had continued the morphia until one and one fourth grain had been taken. The patient was consequently in extreme peril. She was only rescued from lapsing into a fatal coma by vigorous effort. Brandy was administered subcutaneously, with whiskey and strong black coffee by mouth. Atropia sulphat., one thirtieth grain, was also given. After five hours of great anxiety on my part, she was out of danger as far as the morphia was concerned. The patient bore this ordeal well. Nothing abnormal was observed in the further progress of the pneumonia until the third stage was reached. It then became apparent that normal resolution of the solidified lung was not to occur. Upon the eighteenth day of illness the expectoration, which had been rusty and free, began to have a distinctly fetid odor, and a day or two later it became dark, like prune juice, with an extreme fetor. This unwelcome sign was accompanied by a recurrence of chills, an increase of fever, and marked asthenia. Coarse, moist râles were heard over the right back. For a week or ten days this condition continued. Expectoration was at intervals dark in color, almost black, and intensely fetid. At other times it was simply rusty or white with slight fetor, and occasionally tinged with bright red blood. In spite of free stimulation and the use of tonics and a generous diet, she was losing ground. It seemed probable, therefore, that there was somewhere in the affected lung a circumscribed gangrene.

There had thus far been no evidence of pleurisy, but on the fortieth day (February 28, 1882) there was positive evidence of an effusion into the pleural sac of the affected side (right). Chills again recurred with fever. The expectoration became more profuse, being still intensely fetid and dark colored. Sweet breath was also observed.

We therefore had to contend with a partially solidified lung, a portion of which was gangrenous, and a suppurative pleuritis, with a decomposition of the contained pus. The patient was rapidly sinking.

After consulting with Dr. Henry I. Bowditch and Dr. F. H. Williams I performed paracentesis. Twenty-two ounces of very thick, fetid pus were withdrawn. The fluid was at first gelatinous and mixed with bubbles of gas. Her strength at once began to improve, and in three or four days, when the chest gave evidence of refilling, a permanent opening was made, under strict antiseptic precautions, by Dr. A. T. Cabot, Drs. Bowditch, Williams, and myself assisting. This occurred on March 5, 1882, the forty-fifth day of illness. From fifteen to twenty ounces of thick, fetid pus were washed away. In two weeks the tube was removed, and a few days later the opening was healed. The patient's condition was now a hopeful one. The lung was beginning to expand, and a rapid convalescence seemed probable. Two events, however, occurred to retard this convalescence. The first was the sudden death of her father, which occasioned an intense mental shock. Secondly, after she had begun to sit up, and had even walked a few steps, she was suddenly startled by the crash of a falling lamp in the kitchen on the same floor. In great terror, and without aid, she ran to the scene to rescue her children. This effort utterly prostrated her. For more than a year she was unable to walk a step alone. Eight months after her illness, while still a cripple, she became pregnant, and in due time gave birth to a puny child who lived but a few days. From that date to this she has steadily improved in health, being now able to walk alone, and is making rapid progress.

In looking at the case in retrospect we remember that a young and healthy woman is attacked with pneumonia. The disease instead of pursuing a normal course presents several peculiarities. (1.) We recall that the onset, instead of being ushered in with the usual initial chill, is attended by several successive and severe rigors. (2.) We observe that the stage of resolution, instead of taking the normal course of ordinary pneumonia, is modified. Slight fetor of breath and of expectoration is noticed upon the eighteenth day, which is soon intensified, giving evidence of a circumscribed gangrene within the affected lung. (3.) After three weeks more a purulent effusion is found in the pleuritic cavity. Chills and rise of temperature indicate the decomposition of the contained fluid. The patient is sinking rapidly but is rescued by the operation for permanent opening.

In a discussion of this rare case many interesting and important questions might arise. We will, however, consider but one, namely, the ætiology. It would naturally be asked if there were not a discoverable cause for this abnormal and exceptional modification of simple acute pneumonia.

In order to answer this inquiry it will be necessary for us to investigate certain circumstances attending the illness. The family to which my patient belonged consisted of nine persons: a father, two daughters with their husbands and children. From October 17, 1881, to April 2, 1882, a period of six months, seven cases of sickness successively appeared in this family. With the exception of the first, I attended them all. Of these seven cases, four were ill with what, for convenience, I call febricula. They closely resembled one another both in the number and sequence of symptoms. The differences were those of degree or intensity. They were all preceded by headache or malaise, perfectly well marked, which constituted a prodromic stage. The attack in each of these four cases was ushered in by a distinct rigor, or by chilly sensations at least. Pyrexia followed with the nervous symptoms of pain in the back and head, nausea, etc. It is important to note that during the attacks there was a somewhat unusual constitutional depression, suggesting systemic blood-poisoning. Lastly, in each of these cases of febricula, there was a tardy convalescence, debility, and more or less anæmia persisting for several weeks, and in one case for a year (Case VII.). This is the familiar phenomenon after diphtheria and other infectious diseases. In addition to these four cases of febricula a girl, aged fourteen, was seized, on November 13, 1881, with what was reported by the physician in attendance to be typhoid fever. I saw the case just before death. The disease ran a rapid course and resulted fatally in five days. Next in the series was the case of pneumonia

with gangrene and empyema; and six weeks later the father of the family, an old man, was taken ill with phlegmonous erysipelas. This began in the subcutaneous connective tissue of the back of the neck. The disease commenced with a chill, and soon a diffuse and severe inflammation involved the whole posterior aspect of the neck and shoulders. The temperature reached 104° F. The patient rapidly became delirious, then comatose, and died on the third day, before suppuration had become established, succumbing to the septic influences of the inflammation.

Case I.	Oct. 17, 1881.	Febricula.	Three days.	Recovery.
Case II.	Nov. 13, 1881.	Typhoid fever.	Five days.	Death.
Case III.	Jan. 19, 1882.	Pneum., gang., empy.	Two years.	Recovery.
Case IV.	March 14, 1882.	Phlegmon. erysipelas.	Three days.	Death.
Case V.	March 15, 1882.	Febricula.	Two days.	Recovery.
Case VI.	March 27, 1882.	Febricula.	Five days.	Recovery.
Case VII.	April 2, 1882.	Febricula.	Four days.	Recovery.

In this series one important point should not be forgotten. The only members of the family who were exempted from illness were the two males, whose avocations kept them almost all day out of doors. This, with the other facts just mentioned, points suggestively toward some deleterious influence at home. The water used in the house was the Cochituate, and as sickness from its use was not noticed elsewhere, we cannot look to this as having an influence. Nor could I suspect the milk used, as other families were employing the same milkman without harm. Let me say, too, that the family where the sickness occurred is a respectable and industrious one, of neat and orderly habits, and not addicted to any of the common vices. They occupied a suite of rooms in a large and apparently modern building of good appearance. At my early visits in the family I did not notice any especial hygienic defect. There was not then observed any bad odor, and I had no suspicions as to the condition of the house. After the complications of gangrene and empyema arose, and the case of phlegmonous erysipelas followed, I was convinced that the drainage was defective. The Board of Health was notified, and courteously gave me the following entry from the books: "There is a defective drain where waste pipes enter the cellar. A joint is loose, bad odors escape. There are no traps whatever to the sinks in the house. There is no furnace. The soil pipes are not ventilated. Offensive odors from want of traps noticed."

A burning question in the pathology of to-day is, Is pneumonia an infectious disease, or is it a simple inflammation?

As is well known, Jürgensen, in the first edition of Ziemssen's Cyclopædia, expressed himself in favor of the infectious theory. In the second edition, not yet translated into English, we are aware that he has avowed himself a vigorous advocate of this view.

It is doubtless true that Jürgensen's theory has found many adherents in this country and abroad. Latterly much interest has been shown in a class of cases known as, "asthenic, adynamic, typhoid, contagious, epidemic, endemic," and the like. In this connection we recall various reports of what has been called "sewer-gas pneumonia." All are familiar with the epidemic mentioned in the Supplement to Ziemssen. This had its origin in the opening of the parish sewer located in the road nearly opposite a boys' school near London. The rooms facing the road were filled with foul-smelling sewer air. On the following morning a boy sleeping in one of these rooms was taken seriously ill with pneumonia. Others quickly followed, and one of the servants ultimately died. It is interesting to note that Sir William Jenner, whose son attended this school, predicted the attack of pneumonia as likely to follow the escape of sewer gas.

In the *American Journal for Medical Sciences* for January, 1876, Rodman describes most graphically a similar epidemic in a prison in Kentucky. In the course of a year one hundred and eighteen cases of pneumonia occurred, ninety-eight of which ran a peculiar course. This epidemic was plainly attributable to foul odors arising from hygienic defect. Ziemssen's Supplement also mentions Kühn's report of outbreaks in a jail in Hanover. Pneumonia here was also of a peculiar type. This important addition is made to his report: "There were also," he says, "numerous cases of an ill-defined febrile affection, the onset of which was preceded by pain in the head and back, and malaise. They ran a mild course with sudden defervescence about the tenth day, and were followed by a tedious convalescence." I was not aware of this report when I first made my conclusions, but they sound strikingly like the cases of febricula mentioned in my series.

Finally, in the absence of other known cause, is it not fair to infer from this combination of circumstances that sewer gas was the cause of, or at least an important modifying factor in, the case reported in this paper? Whether pneumonia is always an infectious disease is of course an open question. May not the conclusion in the Supplement to Ziemssen be, at least for the present, a safe working theory? "*Pneumonia is often simply an inflammatory disease, but it may depend on various miasmatic influences and then present decided variations in its course and symptoms.*"

RECENT PROGRESS IN THE TREATMENT OF THORACIC DISEASE.

BY FREDERICK C. SHATTUCK, M. D.

INCISION OF THE PERICARDIUM.

SINCE the case of Rosenstein[1] three others have been reported. Partzevsky[2] communicated to the Moscow Physico-Medical Society the case of a man of twenty-three who, four years previously, had gone through an attack of right pleurisy with obliteration of the cavity, partial atelectasis of the right lung, chronic inflammation of its apex, and contraction of the right summit of the chest. He entered the hospital with the signs of left pleuritic and pericardial effusion of recent origin, and absorption soon began, progressing rather more rapidly in the pericardium than in the pleura, indeed, within six weeks all traces of pericarditis disappeared. In the seventh week, however, it was evident that the fluid was reaccumulating about the heart, although absorption was still progressing in the pleura. On the sixty-third day after admission the pleural effusion was gone, but the area of cardiac dullness extended from the right nipple to the left axillary line and upwards as far as the second rib; the cardiac region bulged outwards; the apex beat had disappeared,

[1] Vide JOURNAL, 1882, vol. cvi., p. 158.
[2] London Medical Record, February 15, 1883.

the heart sounds were almost inaudible, and the pulse could scarcely be felt; respiration 52; there were extreme cyanosis and general weakness; swallowing was almost impossible. Under these urgent circumstances the author decided to remove pressure on the heart by tapping, and after an exploratory puncture with a hypodermic syringe an aspirator needle was inserted in the fourth [left?] interspace, within two inches of the sternum, and about two and one half pounds of brownish, turbid, serous fluid were drawn off. This was immediately followed by great relief (pulse full, regular, 96; respiration 36; decrease of cyanosis; easier deglutition), which, however, lasted only three days. On the fourth day the patient had a chill and a morning temperature of 102.7° F., and on the sixth the pericardium was again greatly distended. The symptoms of incipient pulmonary œdema led to a second aspiration on the eleventh day, but only three ounces of pus were obtained. On the following day, the condition of the patient growing worse, an incision was made in the fourth interspace, and two drainage tubes were inserted, through which an enormous quantity of pus escaped. The pericardial cavity was washed out with a salicylic solution (one to three hundred), and Lister's dressing was applied. During the next ten or fifteen hours the patient felt much better, but a sleepless night had utterly broken his remaining strength, and he died in a state of collapse about thirty hours after the operation.

The autopsy showed that the pericardium, which contained three ounces of pus, was greatly thickened and covered with false membrane, that the right ventricle was hypertrophied, and the cardiac muscle fattily degenerated. Both pleural cavities were obliterated, and the lungs atelectatic and œdematous. The liver was pushed up to the fourth rib, and fixed there by adhesions to the diaphragm.

Of the author's conclusions we have space only for the fourth: "In cases of purulent pericarditis it is perfectly justifiable to try an early operation in order to prevent dilatation and fatty degeneration of the heart, which generally supervene here very rapidly."

The second case was reported by Dr. West[1] to the Royal Medical and Chirurgical Society. A boy, aged sixteen, had a large pericardial effusion. The symptoms became so urgent that paracentesis was performed. Pus was obtained. Three days later paracentesis was again performed, and subsequently the pericardium was laid freely open, evacuated, washed out, and a drainage tube inserted. The temperature never rose, and the boy recovered entirely in five weeks, the only feature of interest being an attack of general urticaria, which came on a week after the operation, and lasted three or four days. The following points of special clinical interest were emphasized: (1.) The absence of any special signs to indicate the nature of the effusion. There was no friction to be heard before the operation, or mill-wheel sound characteristic of hydropneumo-pericardium after the free incision. (2.) The place selected for puncture and incision was the fourth interspace immediately below the left nipple. (3.) Fourteen ounces were removed by the first tapping, two quarts by the free incision. (4.) A peculiar epigastric prominence noticed before paracentesis disappeared after operation. (5.) An attack of urticaria. (6.) The pulsus paradoxus, which was constant up to the time of the free incision, disappeared immediately after.

The discussion which followed the reading of the paper was an interesting one, but we can only notice the remarks of Mr. Hulke, who advised the very cautious use of the trocar or needle, and careful dissection down to the pericardium in cases of free incision. He had himself, after medical consultation, in a case which was believed to be one of pericardial effusion, once inserted a trocar and canula somewhat boldly, and the withdrawal of the trocar had been followed by a jet of blood, which gave him great anxiety, but, happily, relieved the patient. A subsequent post-mortem examination showed him that he had punctured the right ventricle, and that the case was one of universally adherent pericardium.

The third case was reported to the Pathological Society of London, also by Dr. West.[2] The patient was a boy of fourteen who, ten days after a severe fall, developed an abscess in the left shoulder, which was incised, and subsequently counter-opened. In addition to pyrexia there were cyanosis and dyspnœa with the signs of pneumonia of the left base. Some days later a few ounces of serum were removed from the left pleura. A second puncture a little later revealed no fresh fluid. The pericardium was felt to be full of fluid by the finger inserted into the side wound, and was incised, with the removal of twenty-four ounces of pus. The patient was relieved for the time, but the dyspnœa and cyanosis continued, and the patient subsequently died in the ninth week from the accident. The autopsy showed a large abscess in the left thigh, and inflammation of the left ankle-joint. There was extensive thickening of the mediastinal tissues, the arteries being deeply imbedded in it. The left pleura was divided by adhesions into three parts, each containing serous fluid. The pericardium was in great part obliterated except at the apex; there was no obstruction of any of the vessels. Dr. West drew attention to the fact that in this case incision had entirely relieved the pericardium, which was rapidly tending towards obliteration fourteen days after the operation, and that death appeared to be due rather to the other lesions present. Dr. West held that surgical interference with the pericardium is not more dangerous than, if, indeed, so dangerous as, that with the pleura or peritonæum.

[Of the four recorded cases in which the pericardium has been incised two were uncomplicated and recovered, two were complicated and died, though apparently in spite, rather than in consequence, of the operation. In West's case the cause of death was pyæmia. In Partzevsky's there would seem to be a possibility that the patient might have recovered if the operation had been done earlier. These facts justify the measure, and indicate that it is likely to become a generally recognized method of treatment. As far as we know the experiments of Dr. Rotch, of this city, which tend to show that the fifth *right* interspace near the sternum is the safest place for aspiration in pericardial effusion, have not yet been put to the crucial test in the living subject. Whether this be the place of election for tapping or not, it is obvious that a free incision into the pericardium should be made in the left side. — REP.]

AN ELASTIC RESPIRATOR AS A MEANS OF TREATMENT FOR EMPHYSEMA.[3]

The shortness of breath which characterizes this disease is largely due to the inability to expel enough air

[1] British Medical Journal, 1883, i., 814.

[2] Lancet, 1883, ii., 991.

[3] Féris, Bulletin Gén. de Therapeutique, 1883, vol. cv., p. 104.

from the chest to make room for a fresh supply, the elasticity of the lungs being lost, and the thorax becoming fixed in the position of full inspiration. The idea of aiding expiration by artificial means is no new one, but pneumatic cabinets and Waldenburg machines for compressing and rarefying air are not portable, a fact which greatly limits the real service these methods, and especially expiration into rarefied air, may be made to render. Impressed with the desirability of having at command some comparatively simple means for exerting a more constant expiratory force in emphysema, M. Féris conceived the ingenious plan of applying a sort of truss to the chest much like that in use for double inguinal hernia. A pad is fitted to the spine with a spring extending from either side across the axillæ to the front of the chest, where the springs terminate in pads like those of a common truss, but larger and less thick. The two anterior pads are fastened together by a strap, and further held in place by straps over the shoulders. The author asserts that the apparatus, when well constructed, can be worn under the clothes without betraying its presence. That it may fit the chest so accurately as neither to be uncomfortable or unsightly, and not to embarrass the respiration it should be made to order for each patient. The pressure should, moreover, be applied where the emphysema is most marked, though those parts are generally the infra-clavicular regions. The action of the apparatus as an aid to expiration is readily understood; of course in inspiration the force of the spring must be counteracted, but this is practically no drawback as in these cases the inspiratory forces are usually increased by exercise.

M. Féris says: "I have used the elastic respirator in thirteen cases of emphysema. From the moment that the apparatus is fitted respiration is established, and forthwith the patient exclaims that his oppression is gone. He can then walk, go up stairs, and sometimes even run, with less fatigue." A patient entered the hospital at Brest for advanced emphysema, and with the aid of a double inguinal truss, improvised temporarily as a respirator, went about the house with comparative comfort. He soon asked permission to go about the town, but the truss caused such an apparent deformity of his person that he did not venture to wear it in the street. He therefore went without it, but after going three hundred yards or so was so oppressed for breath that he was obliged to invoke the aid of a nurse to return. He then put on his chest truss, sallied forth, and remained seven hours.

Stethographic observations show that the respiratory movements are enlarged and diminished in frequency while the apparatus is worn. It is claimed, moreover, that the invention has also the following merits: —

After being worn for eight or ten days the prominence of the chest in the emphysematous regions disappears, and it becomes very difficult to determine by inspection alone the seat of the changes. Furthermore, asthmatic attacks are lessened in degree and frequency, a result not to be wondered at when it is remembered that inspiratory spasm is the characteristic of such attacks. Again, the tendency of emphysema to spread is checked, and it seems probable that the impediment to the pulmonary circulation resulting in engorgement of the right heart is diminished.

As for contra-indications, the author thinks that none really exist. A little time is needed for the patient to grow accustomed to the presence of his truss. The maximum benefits are to be looked for in subjects under middle life with emphysema of the upper lobes. Still the apparatus is worth a trial as a palliative in general emphysema, or in that form which is met with in old people whose costal cartilages are ossified. In one patient who had attacks of hæmoptysis before using the apparatus they were certainly not aggravated by it.

PULSATING EMPYEMA.[1]

The writer has collected twenty-seven cases of this rare and interesting condition, four of which have been under his own observation. In three of these four careful post-mortem examinations were made, and their results were so nearly identical that M. Comby is led to think the following physical condition necessary for the production of pulsating general empyema: the left lung, namely, must be thoroughly compressed and also adherent to the pericardium, in order that the cardiac movement may be transmitted through it to the fluid in the pleura. In ordinary cases of large effusion the lung is compressed toward its root, and the heart is forced independently toward the side opposite to the fluid, but in ordinary cases the fluid never pulsates; this can only occur when the pericardium and lung are adherent. The pulsation sometimes extends over a large area in the lower portions of the affected side, and is sometimes limited to a local swelling which has no constant position in the thorax. Cases are recorded in which the pus burrowed downwards and formed a pulsating tumor in the lumbar region.

With regard to diagnosis, the only affections which can well be mistaken for that under consideration are pulsating pneumonia, which is extremely rare, pulsating cancer of the lung, and aneurism of the aorta. As an aid which may be of service for the differential diagnosis in doubtful cases it may be mentioned that a murmur, so often heard over aneurisms, and not unknown over soft cancers, has never been observed over pulsating empyema. One would think there should be no great difficulties in the distinction between these diseases, and yet in several cases the abscess was allowed to open itself for fear that it might be an aneurism. One of these merits brief notice. A woman received a blow, and six months later began to complain of pain in the side; after a time a hemispherical tumor appeared at the left border of the sternum, between the third and fourth ribs, pulsating synchronously with the heart, and transmitting the heart sounds. An abscess was thought of, but aneurism being feared the patient was kept in bed for three years, the tumor growing all the time in size. The skin finally inflamed, and the pus began to discharge, but a fistulous opening persisted for a long time, and six years after the pains in the side came on the patient was sufficiently recovered to resume her occupation as a washerwoman.

The prognosis as regards recovery is very unfavorable. The existence of pulsation shows that the disease is of long standing, and that the left lung has consequently contracted such adhesions that it cannot be expanded. Little can then be hoped from incision and drainage unless, perhaps, generous resection of the ribs be also practiced. The few instances in which good results have been obtained seem to have been examples of circumscribed empyema near the heart and transmitting its pulsation. "Although the prognosis

[1] Les Pleurésies Pulsatiles (empyème pulsatile), Comby, Archives Gén. de Méd., 1883, November and December.

is fatal it is not the same for all cases; some remain long stationary, and tolerate their effusion and pulsation for several years, the right lung preserving its integrity, but if the right lung is diseased or the seat of tubercles the end comes in some months or weeks."

To sum up, pulsating pleural effusions occur only on the left side, are always purulent, indicate hopeless compression of the lung, and are incurable.

ANTISEPTIC INHALATIONS IN THE TREATMENT OF PHTHISIS.

English and German journals have of late years contained a number of articles advocating the more or less continuous inhalation of carbolic acid and other volatile antiseptics in phthisis, a method of treatment which is not unlikely to come more into vogue with the development of the doctrine of the bacillus tuberculosis. It is found that pure carbolic acid can be inhaled for hours from an oro-nasal respirator without causing irritation of the air-passages, and some observers, prominent among whom are Burney Yeo, Curschmann, and Fraentzel, are favorably impressed with the results. Dr. Hassall,[1] of London and San Remo, has published several articles which tend to show that the application of volatile antiseptics to the respiratory tract by means of respirators and atomizers is inefficient. One of the methods pursued in his investigations was to charge a respirator with a known quantity of the agent, allow it to be worn for a fixed time, and then determine by quantitative analysis the amount of loss of the antiseptic in the form of vapor. The loss after periods of one and two hours was found to be comparatively trifling, and the sputum raised after the respirator had been worn never had the least smell of carbolic acid. He found, however, that when the agent is used on a series of cotton screens suspended in a room at a temperature of about 70° F. it is almost entirely volatilized. Acting on these experiments he has constructed at San Remo an inhalation chamber with a cubic capacity of 1170 feet, one door and one window, no chimney or fire-place, but a register communicating with a small furnace. With the desire that this method of inhalation may be fairly tested Dr. Hassall will allow its use to medical men of all nationalities in San Remo, so that any of their patients may make use of it under the observation and guidance of their own attendant.

ENDEMIC HÆMOPTYSIS APPARENTLY DUE TO A PULMONARY PARASITE.

Dr. Manson,[2] of Amoy, China, read a very interesting paper on this subject to the Medical Society of London. He finds that the expectoration of blood, generally in small quantities and very frequently, and bloody mucus is a common affection in Formosa and Japan, and on examining the sputum from some of these cases under the microscope he discovered the constant presence of peculiar ova, one two hundredth to one five hundredth of an inch in diameter, and containing no trace of embryos. After cultivating the ova in water with proper precautions for four to six weeks he was rewarded by seeing in nearly every ovum the development of active ciliated embryos closely resembling those of Bilharzia and other distoms. Soon after this period the embryo succeeds in breaking through its investment, and rushes through the water, assuming various shapes, with its cilia in constant motion, apparently in eager search of its intermediary host. Through a fortunate train of circumstances, for the detail of which we have here no space, Dr. Manson obtained a specimen of the parent worm, which after having been some time in spirit measured half an inch in length by a sixth of an inch in breadth, and a third of an inch in thickness. It was sent to Dr. Cobbold, who pronounced it a new species, and named it, after the discoverer, Distoma Ringeri. It seems probable that the parasite is communicated from one person to another in some way by means of water, and the affection appears to be a counterpart of endemic hæmaturia. China, as far as is known, is free from the disease, which is a very chronic one. Dr. Manson thinks that the constant or repeated small bleedings cannot fail in certain cases to produce, in time, a state of intense anæmia, rendering the subjects of it very liable to attacks of dangerous forms of other diseases. Two patients were sent him from Formosa, and he kept them in his house for some time for purposes of study, treating them by inhalations of atomized solutions and infusions containing quassia, kousso, santonin, turpentine, and sulphurous acid. By these means one patient was apparently cured, but the other was not benefited.

NITRITE OF SODIUM IN ANGINA PECTORIS.

We now know that other nitrites besides that of amyl dilate the smaller arteries and lower the blood tension. It has been found that nitro-glycerine is a valuable remedy in angina pectoris, while Reichert and Weir Mitchell have used nitrite of potassium for epilepsy, and shown that it has effects which are almost identical with those of amyl. Dr. Hay [3] has used nitrite of sodium in one case of angina with marked good effect, complete relief following within two or three minutes after administration. In the same patient amyl gave only partial relief, and nitro-glycerine, though equally efficacious with the sodium compound, produced disagreeable throbbing in the head, which the latter did not. The effects of the sodium were also more lasting than those of the amyl. Of the pure drug one grain is probably as much as it is safe to give at first, but the pure drug is not easy to obtain. Dr. Hay found that a specimen obtained from a London manufacturing firm of the highest eminence did not contain more than thirty-three per cent. of the *nitrite*, the rest being *nitrate*. This fact should be borne in mind, and allowed for in case small doses prove useless. The drug is freely soluble in water. [It may be well to repeat a caution which has already appeared in print. In the last edition, namely, of Ringer's Therapeutics the dose of sodium nitrite is inferentially stated as *twenty* grains, an amount which might produce disastrous effects if the sample were pure. Drs. Ringer and Murrell [4] gave fifteen-grain doses of the impure drug to hospital out-patients, and reported the cases briefly, stating the disagreeable sensations produced in some patients. An outcry was made in the daily papers, and severe strictures were passed upon physicians experimenting on patients with drugs the properties of which are unknown. It was thought best to bring the matter to the notice of the government of the hospital, which formally exonerated Drs. Ringer and Murrell from all blame. — REP.]

[1] Lancet, 1883, i., 765. British Medical Journal, 1883, ii., 869. Lancet, October 6, 1883. Lancet, 1884, i., 106.

[2] Lancet, 1883, i., 532.

[3] Practitioner, 1883, i., 179.

[4] Lancet, 1883, ii., 766 and 880.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

STATED meeting, February 7th. The President, DR. FORDYCE BARKER, in the chair.

THE PREVENTION AND TREATMENT OF PUERPERAL FEVER.

The special order of the evening was the discussion of the paper of Dr. T. Gaillard Thomas, on the above subject, read before the Academy December 6, 1883.

The discussion was opened by a paper by the PRESIDENT which was read for him by DR. GASPAR GRISWOLD. He said that the more eminent the authority from which they emanated, and the more admirable the method of their expression, the more dangerous to the profession and the community were erroneous views like those of Dr. Thomas, and the more necessary was it to refute them. Some of the points on pathology had never before been advanced by any other author, as far as he was aware, and he thought the whole tone of the paper was misleading because it was so thoroughly saturated with the idea of septic infection. He had adopted the view that puerperal fever was puerperal septicæmia, and it mattered not whether it assumed the form of metritis, phlebitis, cellulitis, peritonitis, or lymphangitis, the essence of the disorder was a poison, which was absorbed into the blood through some solution of continuity. The tendency to this pathology, which was the result of studying the disease in hospitals, had been rapidly growing in the last few years, especially among the German authorities; but he (Dr. Barker) had seen no reason to change the views which he had expressed in his work on the Puerperal Diseases, and he could not but state his conviction that in private practice, where septic influences rarely prevailed, twenty cases of puerperal fever, which were due merely to local inflammation, occurred to any one that was the result of septicæmia. Dr. Thomas had contended that the lochial discharge was a poisonous fluid, liable to infect the system through abrasions of the genital tract, and the prophylactic measures which he recommended were based on this theory. In his own opinion, however, this was a complete mistake, and in epidemics of puerperal fever (which sometimes broke out in rural districts after a long period of immunity) the disease differed altogether from septicæmia in its origin, modes of attack, symptoms, and anatomical lesions. In hospitals, where the epidemics were so frequent and fatal, he believed it to be due to nosocomial malaria. Dr. Barker then gave an account of an epidemic which occurred in the best portions and among the higher classes of the city, in New York, in 1873. That Dr. Thomas's views as to the dangerous character of the lochia were founded wholly on theory was proved, he thought, by the following quotation from his paper: —

"In every case the offensive fluid, called lochia, poisons these freshly made, unprotected wounds, and yet what are the usual results? Recovery uniformly, I might say universally, unless some unusual occurrence manifests itself to prevent this happy consummation. Theorizing about the matter, one would suppose that the mortality resulting from such a state of things must be excessive.... And yet the facts are these: only about one or two in every one hundred parturient women ordinarily die, when properly cared for during labor, even in public hospitals."

If, in the language of Dr. Thomas, she who was about to bring forth must be treated as one about to go through the perils of a capital operation, and if in every case of confinement the same preparations and precautions were to be made, as the surgeon insisted on in cases of ovariotomy, it seemed to him that it was the imperative duty of the State to make child-bearing a penal offense, except in those with sufficient means to enable them to carry out all the elaborate measures required. In this connection Dr. Barker quoted a letter recently published in the *Medical Record*, in which the writer said that after reading the reports of some of the late meetings of the New York societies, at which the extreme difficulty of preventing puerperal septicæmia was set forth, he would respectfully suggest to the Academy of Medicine the propriety of appointing a committee to devise means for requiring the fair sex (and if necessary enforcing the measure by law) to wear over the genitals from the appearance of the catamenia to the menopause an antiseptic pad, which should never be removed except under proper antiseptic precautions, such as the use of the carbolic spray. In Dr. Barker's opinion, when septicæmia was present in puerperal fever, it was simply as the result of antecedent trouble; the disease as a rule being due to other causes. In private practice occult atmospheric influences were, no doubt, often responsible for it; while in hospitals, as had been said, the trouble was apt to originate in nosocomial malaria.

In speaking of antiseptic injections, he said that while they were sometimes of service, their use was liable to interfere with the cicatrization of lesions resulting from labor. As long ago as fifteen years since he had employed intra-uterine injections, as would be found on page 320 of his Puerperal Diseases. While refrigeration might also be useful in certain instances, his experience with the method, as a rule, had not been favorable, and he then related several cases treated under his care at Bellevue Hospital, in which serious pulmonary symptoms had been occasioned by it. On page 476 of his work he had stated his creed, and unless some new facts could be educed to convince him of the correctness of Dr. Thomas's views on puerperal fever he expected to die impenitent.

At the conclusion of the paper DR. BARKER made a few additional remarks, in which he said that nearly thirty years ago he had used vaginal injections, of Talanague's solution, for a week after labor, and later had used carbolic acid in place of it. This practice he had habitually followed until within the last three years. By some observations made by Mr. Thomas Keith, of Edinburgh, during the International Medical Congress in London, in 1881, he was induced to reduce the strength of the carbolic acid injections one half, and during the past two years he had given up their use altogether. He did this with the less reluctance because he believed it to be a fact that the strength of any carbolic acid solution that could be used was not sufficiently great to destroy deleterious micro-organisms, if any were present; and he had been abundantly satisfied with the result, since during the last two years neither himself or his colleague, Dr. A. A. Smith, had had a single case in which there had occurred the slightest interruption to perfect convalescence after parturition, or in which anything more than

the ordinary attendance was required, namely, one daily visit for nine days.

Dr. W. M. Chamberlain made some remarks in regard to the advantages of the tube which he had devised, and stated that he had anticipated one of the modifications of its construction which Dr. Thomas had suggested, namely, bringing the holes nearer the extremity.

Dr. H. T. Hanks spoke of the prevalence of puerperal fever in the country as well as the city, and gave some statistics of the disease in New York, from which it appeared that during 1883 262 patients had died from it, while during the past five years there had been 1005 deaths. From his own experience it was clear to him that no hypothesis could satisfactorily explain the phenomena met with in it except septicæmia, and, consequently, he agreed in the main with Dr. Thomas's plan of prophylaxis and treatment. The ante-partum injections, however, he thought unnecessary, and the use of ergot three times a day for a week seemed to him unjustifiable and harmful, except in cases where the uterus did not contract well. After more remarks on the primary operation for lacerated perinæum, he spoke of the treatment of puerperal septicæmia, and begged to add two suggestions: The first was in reference to the use of aromatic spirits of ammonia, which he advised to be given in half-teaspoonful doses every two hours, and the second was, that a bed-pan should be used when making intra-uterine injections, instead of moving the patient to the edge of the bed. He had devised one of block tin, upon which the patient could lie with perfect comfort, and he now exhibited this to the Academy. In conclusion, he said there were four assistants upon which he relied in every case of confinement which he was called upon to attend, and these were: Pure air, absolute quiet, judicious diet, and appropriate antiseptic precautions.

Dr. W. T. Lusk expressed the opinion that puerperal fever and surgical fever were absolutely identical, and that certain apparent differences were due simply to the anatomical differences between a clean cut wound and the condition of the genital tract after parturition, in regard to which it was necessary to take into consideration especially the capacity for rapid absorption and the nearness of the parts to the peritonæum. A great deal of difficulty and difference of opinion had originated, he thought, in not recognizing the distinction between putrid intoxication and septicæmia. This difference depended on the presence or non-presence in a decomposing fluid of special micro-organisms; and the treatment that was appropriate for one condition was not at all adapted to the other. The rod bacteria were not absorbed in the human subject, and the putridity of any discharge was not the source of septicæmia proper. It was only the warning that round bacteria, which were capable of being readily absorbed, multiplied, and distributed to various parts of the system, were likely to be generated.

In regard to the matter of prophylaxis he thought that too much of a burden in the way of detail should not be placed upon the practitioner, and, for one thing, he did not believe that the antiseptic washing of the walls and furniture would be of any service, as he had done this faithfully in the lying-in wards of Bellevue Hospital, and it had never had the slightest effect. If in any house, however, in which a woman was to be confined, there had been a case of scarlet fever, diphtheria, or other infectious disease, he would advise that the room should be fumigated with sulphurous acid, if this had not already been done. He would also advise that patients should never be confined in rooms adjoining water-closets, as the puerperal woman was peculiarly susceptible to sewer-gas poisoning.

After an ordinary labor there was not likely to be primary decomposition in the cavity of the uterus, since the air was excluded from it. In the vagina, however, where there were heat, moisture, and air, the conditions were somewhat different, but if vaginal injections were made as soon as any bad symptoms appeared, all difficulty would be avoided. In labors in which it was necessary to introduce the hand or instruments into the uterus, those conditions were left which would be likely to result in putrid intoxication, and in every such case it was the duty of the accoucheur to thoroughly wash out the uterus at the time of the labor. In any case of puerperal fever where there was not a "puddle" in the uterus, there was not the slightest use in washing it out (though perhaps one injection might be made by way of precaution), as the septicæmia from which the patient was suffering was entirely beyond the reach of any such means of treatment as this. When last summer he had visited a number of the principal lying-in hospitals of Europe, he had found that it was universally the practice to wash out the uterus only in cases where air had been admitted to its cavity during labor. In Vienna they now used a suppository of iodoform with gum tragacanth, and while, up to a recent period, the mortality had been five or six per cent., during the last year there was only an average of one death in two hundred confinements. In Prague (where, however, the iodoform suppositories were not used) there had been 1100 cases of confinement without a single death, but it was only since the indiscriminate use of injections had been given up that these good results had been obtained. They were now never resorted to except where well-defined indications were present.

Dr. P. F. Mundé related his experience with the disease, and said that while, as a rule, puerperal fever and puerperal septicæmia were undoubtedly the same thing, there were certain cases in which he agreed with Dr. Barker, that sepsis was not the prime cause. In speaking of the treatment, he dwelt upon the dangers connected with the use of the intra-uterine tube, and said he agreed with Dr. Lusk, that it should only be employed to meet certain well-defined indications. Even then the injections should be discontinued at as early a period as possible.

The Chair now asked Dr. Thomas to close the discussion. In commencing his remarks he spoke of a murder trial at which he had been present when a lad, in which the counsel for the prisoner, when called upon to speak after the prosecuting attorney, simply said, "May it please your honor, the case is closed — I rest it here. The gentleman on the other side has made so able a speech in favor of my client that I rely upon it for his acquittal," and the prisoner was acquitted. Dr. Thomas said that he felt very much in this way in regard to Dr. Barker's paper; but as discussions such as this could not fail to do good, he thought it would be well to say a few words in self-defense. After mentioning his regret that the President had seen fit to use against him a two-edged sword like ridicule, which was, however, the poorest of arguments, and which only indicated the weakness of his position, he said that Dr. Barker's attack called for no rebuttal

and demanded no argument on his part, as he was perfectly willing to stand by the position of his paper of December 6th, in which he had said all that he had to say on the subject under discussion. There were, however, one or two points upon which he felt it necessary to touch in order to avoid misrepresentation.

Dr. Barker appeared to object to the fact that in his pathology he had not stuck closely to the dicta of the text-books, and hugged to his soul the tenets of a bygone time, as he himself had done; but if he had had no opinions of his own, founded upon thirty years' practice in a large metropolis and experience in great hospitals, he would not have appeared before the Academy at all. In accordance with the recent views of pathologists on this subject, however, it was his antagonist's opinions that were effete, and not his own that were jejune. As far as he could gather anything certain from Dr. Barker's discursive paper, the pivotal idea of his attack seemed based upon the belief that he (Dr. Thomas) regarded the lochial discharge as a poisonous fluid, which, by absorption by abrasions in the genital tract, gave rise to puerperal septicæmia. Such an absurd idea had never entered his mind. What he did state was, that the lochial discharge was a material ready to take on those alterations which were effected by micro-organisms of bad character, and which, changing its nature, rendered it poisonous to the abraded tissues. He believed that it would be found that the pathology which he had offered in his paper was merely abreast with the views of the advanced pathologists of Germany, France, and Great Britain. As to the pathology of his adversary, Dr. John Thorburne, of Manchester, England, very justly expressed concerning it, he thought, the accepted view of the profession, when, in a foot-note to an article upon Metria, in the *British Medical Journal* of August 11, 1883, he said: "It would be inexcusable not to make some reference to the very able papers of Dr. Napier in the *Obstetrical Journal* for 1880, on Puerperal Fever. He, along with Fordyce Barker, defends the old position of a specific puerperal fever *sui generis*. . . . I can only say that his invaluable collection of facts produces in me an opinion diametrically opposed to his own."

As to the want of thoroughness and sketchiness of detail with reference to his description of symptoms with which his critic had upbraided him, Dr. Thomas remarked that he had intentionally assumed this style, as his paper was distinctly announced to be one upon The Prevention and Treatment of Puerperal Septicæmia, and upon nothing else. The subject of that paper was the only legitimate one before the Academy at this time, and he hoped that those who had entered into the discussion to-night would pardon him for saying that we had heard a great deal in the way of repetition as to pathology, a great deal about tubes and the number of holes which should be made in them, and diverse opinions as to whether or not a suppository of idioform should be put into the vagina, and small doses of ergot given for a week or so post partum; but these were non-essentials, and hardly worth the valuable time which had been given to them, when so much of greater importance remained to be considered. The crucial questions which were before the Academy to-night were these: (1.) Are we to look upon puerperal septicæmia as a poison due to the development of micro-organisms, and are we by every means in our power to guard against the contact of these with the genitals of the puerperal woman? and, (2.) When the disorder is developed, is it best for us to keep our patient semi-narcotized and quinineized while the distended abdomen is covered with stupes of turpentine or poultices, and then await the result, as has been formerly done, or are we to seek to destroy the septic germ which has invaded the genital tract by means of local applications? These were the great questions. The other points were not essential.

Dr. Thomas then went rapidly over the suggestions which he gave in his paper for the management of ordinary confinement cases. In regard to the first, as to cleansing the lying-in chamber and applying antiseptic solutions to its walls and floors before labor set in, this seemed to appear to some like one of the labors of Hercules, but there was really no difficulty about the matter. He then described how simply it might be accomplished, and went on to say that although, as Dr. Lusk had seemed to find, it might not be of much benefit, he had never seen it do any harm, and until he did so he should feel that it was safe to resort to it. But at the same time he did not regard this cleansing of the chamber by any means essential. If, however, he needed any defense for having pressed the claims of cleanliness in this regard he hoped it would be found that he who offered rules for a system must aim high, and not low; that, aim as high as he might, many would fall below the standard, and that if a low level were assumed no one would go above it and take a higher. Dr. Thomas dwelt for a short time on his second and third suggestions for prevention, which are as follows: (2.) "The nurse and physician should take care that all their clothing, both under and upper, be clean and free from exposure to the effluvia of any septic affection. Should either of them have been exposed within a fortnight to the effluvia of such affections as scarlet fever, typhus, erysipelas, septicæmia, or the like, they should change every article of clothing, and bathe the entire body, especially the hair and beard, with a reliable antiseptic solution. That which I prefer for this purpose is a saturated solution of boracic acid." (3.) "As labor sets in the nurse, having thoroughly washed her hands, cleansed her nails with a stiff nail-brush, and soaked them in antiseptic fluid, should administer to the patient a warm vaginal injection of antiseptic character, bathe the vulva and surrounding parts freely with the same, repeat this every four hours during labor, and keep a napkin, wrung out of the warm antiseptic fluid, over the genital organs until the birth of the child." His fourth suggestion, he said, merely related to cleanliness of the hands on the part of doctor and nurse. And no one, he thought, would quarrel with the fifth, which merely required the physician to attend intelligently and faithfully to the performance of the third stage of labor, and the examination for and closure of wounds about the vagina and ostium vaginæ. In regard to the seventh suggestion, the use of vaginal injections every eight hours, beginning eight hours after delivery, he said that the arguments which had been brought up against this practice since he had read his paper had had great weight with him, and that he had to confess that he felt less firm in his convictions upon this point than he did. In the future, therefore, he would examine the question carefully before he determined to adhere to his plan. The rest of the rules would be so certainly agreed in that he could not question the concurrence of all, even of the eminent authority, the President of the Academy, who regarded his efforts as

so hurtful to progress and so dangerous to the community.

Passing to the means which he had suggested as to treatment, Dr. Thomas stated that with reference to his present views upon the use of cutaneous refrigeration for the controlling of high temperature, however produced, and occurring in the course of whatever disease, he could only say, after a very extensive experience, that were the laws of the country to prohibit a resort to this method he would be unwilling to continue the practice of his profession, for then he could not do so without relinquishing what he sincerely believed to be one of the most valuable therapeutic resources at the disposal of the physician. In regard to intra-uterine injections, he said that if he had expressed himself in such a way as to allow it to appear that he resorted to them with very little provocation, and upon all occasions when hyper-pyrexia supervened after childbirth, no impression could be more erroneous. No one could have striven more than he had done to keep within proper bounds the indiscriminate use of this valuable but dangerous resource. He hoped that Dr. Barker would here allow him to offer a most full and sincere apology for not having accorded to him in his paper the credit which was his due in connection with the introduction of intra-uterine injections into obstetric practice, as the omission was due to ignorance of the facts which he had stated, and not to any intentional neglect.

He had not been surprised, he went on to say, to notice, among other criticisms of the preventive measures which he had suggested, a tendency on the part of some to ignore the necessity for them, especially in private practice, and he had come here prepared to use some statistics which would invalidate this position. He would not use these, however, but employ in their stead some which had been offered by the speakers of this evening. Dr. Hanks declared that more than 250 women died from puerperal septicæmia in this city last year; that was 250 to 1,000,000 inhabitants. The United States probably contained, in round numbers, 40,000,000 inhabitants, which would give us 10,000 deaths in one year, and in twenty years, which was about the average child-bearing time of women, 200,000 deaths. Surely this looked as if something ought to be done to lessen the mortality of this disease. That the plan which he had suggested would accomplish this result he thought was proved by the statements of Dr. Lusk, who had just told them of the remarkable results obtained in Prague since the adoption of a similar plan. Some might object that these were the statistics of hospitals, and that the disease was certainly rare in private practice. Such was not the case, however, for in the two months that had elapsed since he had read his paper he had been called to no less than five cases of puerperal septicæmia, all of which were of the most desperate character. Dr. Thomas mentioned the different practitioners with whom he had seen these cases in order to show, as he said, that instances of the disease occurred even under the most favorable circumstances as to social surroundings and medical care, and then concluded his remarks in the following words: "I feel very sure, gentlemen, that you will give full credence to two statements which I make in bidding you good night. First, that I have no wish to be dogmatic and uncompromising in reference to the rules which I have suggested for the prevention and treatment of puerperal septicæmia. Second, that if venom has seemed to flow from my tongue it has not reached it from my heart, which has been entirely free from it, and that if I have seemed to strike too trenchant blows at the honored head of our President I have struck purely in self-defense at one for whom I would yield to no man in respect, admiration, and affectionate regard."

ESSEX NORTH DISTRICT MEDICAL SOCIETY

QUARTERLY MEETING, WEDNESDAY, JANUARY 23, 1884.

REPORTED BY E. P. HURD, M. D., CORRESPONDING SECRETARY.

A QUARTERLY meeting of the Essex North District Medical Society was held in Lawrence, January 23d ult., at the house of Dr. C. N. Chamberlain, President.

An interesting paper was read by DR. LESLIE, of Amesbury, on Ovarian Pain. Several illustrative cases were reported by the reader.

DR. HOWE, of Lawrence, read a paper on

ADDISON'S DISEASE,

reporting one case.

A year and a half ago Dr. Howe was called to attend A. B., female, unmarried, aged twenty-four years. Of naturally fair complexion, she suddenly became bronzed; face and neck, hands, arms, and thighs of a dark-brown color; bronzing less marked over chest and back; dark areola around nipple. The discoloration even invaded the gums and mucous membranes. Patient rapidly lost strength, and in one month died in collapse. No autopsy. The reader gave a brief history of Addison's disease, regarding it as a chronic inflammation of the supra-renal capsules, terminating in caseous degeneration of the inflammatory products and of the elements of the tissues themselves. The cause of the bronzing is unknown.

DR. HOSMER, of Watertown, President of the State Society, who was present by invitation, gave an oral report of three cases which had come under his observation. In one of these cases, a patient of fifty-three, phthisical, and ill for some months, the autopsy disclosed supra-renal capsules enlarged and transformed to cysts containing liquid. A prominent symptom in this case was palpitations, coming on without any known cause, due probably to some fault of innervation.

In all of Dr. Hosmer's cases excessive prostration with irregular action of the heart, headache, etc., accompanied the tanned appearance of the skin, characteristic of the affection. Patients of naturally fair complexion become so bronzed as to resemble mulattoes.

DR. HOWE, of Newburyport, reported two similar cases occurring in his own practice, in which the bronzing was accompanied by anæmia and debility. In one case where the patient died suddenly an autopsy was held which revealed atrophic degeneration of the capsules. All treatment seems unavailing in these cases.

DR. G. M. GARLAND, of Boston, gave an interesting discourse on

THE TREATMENT OF GLEET AND GONORRHŒAL STRICTURES BY OTIS'S METHOD,

illustrating his remarks by citing results from his own private and hospital practice. Formerly it was taught that strictures were the consequence of prolonged gon-

orrhœal irritation. Otis, of New York, has revolutionized the theory of the location of strictures. There are certain places in the urethra with physiological narrowing which back up the secretion, so causing irritation, inflammation, and granulation of the mucous membrane and inflammatory submucous thickening and stricture. The first of these is from one half to one inch from the meatus. A case having a slight stricture here (24 French, while the urethra behind was 34) was operated on three weeks ago, and the gleet is now entirely well.

Otis shows that the ratio between the size of the urethra and circumference of the flaccid penis is physiologically constant. A penis with a circumference of three inches should admit a sound of No. 30 French. One of four inches a No. 40 French. No. 38 French is frequently used, after cutting slight strictures, with no pain at all. Any stiff instrument below 15 in size is dangerous to use in these cases, and a soft catheter should be employed rather than a stiff one.

In searching for strictures a large sound stretches them, and gives no satisfactory evidence. Hence a full set of acorn bulbs or one of Otis's urethrometers should be used, which has a gauge for the size of its bulb from 12 French upwards. Pass this instrument deep into the urethra and distend till it causes discomfort, then begin to draw back easily without force till it brings up at a stricture. Now read off its distance from the meatus, and relax the bulb till it passes through, noting the size of the stricture by the reading of the gauge. Then distend again, and repeat as before. In one case five strictures were distinctly located between the ligament and the meatus. There had been here a gleet of twenty years' standing. These strictures vary from 19 to 28 or even 35 French. The next step is to cut them. Otis's method can limit the cutting with a scientific exactness. All other methods trust more to luck.

In divulsion there is no control or knowledge of the amount of injury. The urethra is made tense by Otis instrument, and cuts of exact locality, length, and depth are made. The instrument is removed and bulbs passed, and if any trace of stricture remains the operation is repeated.

Otis, now, never does the operation in the membranous portion of the urethra. Here slow, careful stretching is alone allowable.

One case of Dr. Garland's had penile strictures allowing only a No. 9 bulb. These were cut up to No. 34, and then the membranous portion was still closed and it was impossible to get into the bladder. But after healing from the operation, a No. 12 was passed, and by two sittings this was increased to No. 18 French, and the patient was back at work.

If membranous strictures cannot be cured by slow dilatation, the only resort is perineal section. The preparation for the operation should include dosing with liquor potassæ for a day before, and the urine should be kept alkaline through the healing stage.

As a rule give quinine; keep the bowels empty. Ether is advisable for deeper strictures, but not for those at meatus.

As a rule, do not operate till the acute inflammation has subsided, though this need not deter in urgent cases. Cut on the upper surface of the urethra in deep strictures, but below in those near the meatus. Let the patient alone for forty-eight hours, without catheter, as urine will be passed without harm.

An attendant ought to be by for twenty-four hours, as there is danger of secondary hæmorrhage, especially if an erection occurs during sleep. Especially is this to be feared in about eight or ten hours after the operation. In forty-eight hours pass the catheter every other day, and distend gradually with the sound, until by the eighth or ninth day the passage should be fully distended, as it heals quickly about this time and a serious contraction may otherwise occur. Generally keep the patient in bed a week. If the cuts open the urethra to No. 36 French, it would be expected to heal, allowing passage of No. 33.

While the operation is simple it still necessitates great care. The danger from hæmorrhage is slight, as it is always easily controlled. Some patients lost only three or four drops of blood. A temperature above 100° F. is rare.

Dr. Garland's oral discourse was followed by a brief discussion, in which several of the members related their unsatisfactory experience in the treatment of urethral strictures with the older methods of gradual dilatation and divulsion.

The meeting ended with a sumptuous entertainment provided by Dr. Chamberlain.

ANNUAL MEETING OF THE MASSACHUSETTS MEDICO-LEGAL SOCIETY.

W. H. TAYLOR, M. D., SECRETARY.

NEW MEMBERS. PUBLICATIONS, COMMITTEES, ETC.

FEBRUARY 6, 1884. The meeting was called to order at 12.15 P. M., by President PRESBREY. Present, twenty-one members. Records of the last meeting were read and approved.

The nomination of Medical Examiner J. M. Crocker, of Provincetown, as a regular member of this Society, was referred to the Executive Committee, with instructions to report at this meeting.

The PRESIDENT announced that Clark Bell, Esq., President of the New York Medico-Legal Society, had made certain propositions to the Society regarding publication of the transactions, and representation in the *New York Medico-Legal Journal.*

On motion of Medical Examiner PINKHAM, the papers were referred, without being read, to the Standing Committee, with power to act in the matter.

The Executive Committee having reported favorably upon the nomination of Medical Examiner Crocker, he was unanimously elected to regular membership.

Theodore M. Osborn, Esq., of Peabody, was unanimously elected an associate member of the Society.

Corresponding Secretary PINKHAM made a partial report of the work of medical examiners, and gave his views upon methods of making returns, which elicited some discussion.

Medical Examiner TOWER read an obituary notice of Medical Examiner W. M. Parker, of Milford, at the time of his death a regular member of this Society.

Upon motion of Medical Examiner TOWER, voted to note the fact of such reading upon the records of the Society.

Voted, upon motion of Medical Examiner DRAPER, that the Standing Committee be authorized to select cases from the files of the Society for publication in *The Boston Medical and Surgical Journal.*

Upon motion of Medical Examiner TOWER, voted

to appoint a committee of three to consider the law of medical examiners as to its defects and needs, with a view to changes therein, the committee to report at the next meeting of the Society. The President appointed Medical Examiners Tower, Draper, and Hosmer such committee.

Medical Examiner Fish read a valuable paper on External Appearances of Pistol-Shot Wounds, which was received with applause by the Society, and led to considerable discussion.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

February 11, 1884, the President, Dr. Charles D. Homans, in the chair.

Dr. F. C. Shattuck exhibited a patient with

MULTIPLE SARCOMA OF THE SKIN,

under treatment by hypodermic injections of Fowler's solution, from four to six minims once daily.

Dr. Francis Minot read a paper on

THE TREATMENT OF ACUTE PNEUMONIA,

which may be found on page 169 of this number of the Journal.

Dr. C. E. Stedman spoke of the untrustworthiness of statistics of the disease. Grouping a number of cases, subjected to the same treatment, but necessarily omitting to note their severity, is of no value. Trousseau's statistics omitted the cases that would have recovered at any rate, and gave him a mortality of eighteen per cent. Grisolle's, also leaving out light cases, sixteen per cent. Wurmb and Caspar twelve and fifty-five hundredths per cent., treated with bleeding and drugs. The homœopathic hospital in Leopoldstadt ten and a half per cent. The readings of papers like Dr. Minot's is of far more value to students than the study of statistics.

The speaker referred to the importance of rest. He mentioned a patient with single pneumonia doing well, who on the seventh day was moved on to a lounge by officious friends, anxious to make the bed, and who died three days later in consequence, as he believed, of being moved about. He was pleased to hear the jacket-poultice disapproved of. It is dirty, and it is no light thing for a patient to raise two or three pounds of mush forty times a minute. Flannels wrung out in warm water will amuse busy attendants as well. He supposes every one cautions patients against talking. It is of the greatest importance. Examinations of the chest are of course necessary until the diagnosis is made. After that they should be as seldom as possible. Dr. Stedman spoke of the striking effect of a change of position. He once had a lady propped up in bed, intending to bleed her for an access of dyspnœa, but getting her up relieved her so much that he left her unbled. She remained propped up all night, and finally recovered. He thinks that the pulse is the indicator for stimulants. A patient with a pulse of 115 or lower always does well unless there is some fresh warning.

Dr. J. B. Ayer had rarely known the discomfort of a jacket-poultice to be complained of. If the front and back are separate the back need not be often changed.

Dr. Minot, in answer to the last speaker, said that he never gave quinine as a sedative.

Dr. H. W. Williams asked the reader what is the incubation period of pneumonia.

Dr. Minot answered that it is probably a short one. It is hard to settle the question.

Dr. Williams said that homœopathic statistics had been referred to. When he was in Vienna he had been to the homœopathic hospital to see if anything of value could be picked up, and had seen numbers of cases called pneumonia, but not having so far as he could see symptoms warranting the name. On asking the reason for the diagnosis he was told by an attending physician that these patients would have pneumonia if it were not broken up.

Dr. Minot, to a question of Dr. H. C. Haven's, said that he thought a nursing child with the disease would continue to nurse. He, however, rarely sees the disease in children under a year, though often between one and three years. Bailly and Legrange show that many cases of atelectasis pass for pneumonia, giving rise to another variety of statistics. When a student at Paris in 1845–1847 tartar emetic was given at the *Enfants Malades*. Many died.

Dr. R. H. Fitz asked if there is evidence of contagion.

Dr. Minot answered no. We often have more than one case in one house. The disease is not communicated to other patients in hospital wards, so far as he knew.

Dr. C. E. Stedman said that during the late war pneumonio was supposed to be contagious on the receiving ship Ohio. She was greatly crowded in cold wet weather, and there was excessive mortality. He was himself on medical duty at the yard, and knew the opinion of the medical officers of the ship.

Dr. F. C. Shattuck alluded to the report of an apparently similar outbreak which took place on some English war vessels in the Mediterranean. A very recent number of the *Zeitschrift für klinische Médicine* contains an article by Mendelssohn on the infectious nature of pneumonia. This writer has made a pretty full collection of the literature bearing practically on the infectiousness and contagiousness of this disease, and has also availed himself of the discovery of an organism peculiar to it by Klebs, Koch, Friedländer, Leyden, and others. The latter has found the parasite in the material which he withdrew from the solidified lung of a living patient by a hypodermic syringe. Mendelssohn's article is not fair in some respects. He speaks, for instance, of some very interesting prison epidemics, notably those reported by Rodman and Kühn, as if they were of pneumonia pure and simple. Any one who takes the trouble to consult the original articles will see that the cases differed widely from the common lung fever, which, as Dr. Minot remarks, has always until of late been classed among the local inflammations. It is true that in these prison epidemics there was pneumonia, but there were also albuminuria, swelling of the spleen, pericarditis, and other indications of septic infection in a very large proportion of the cases. There seems to be no reasonable doubt that over-crowding and defective sanitation played a very important rôle in these epidemics.

Dr. F. Gordon Morrill referred to experiments when the sputa was injected into each of seventeen rabbits. The five rabbits who survived five days were then killed, and found to have hepatized lungs.

Dr. F. H. Williams spoke of cases in which the

peculiar ratio of pulse to respiration does not occur. He had seen a patient whose respirations are commonly ten or twelve, but were increased to sixteen or eighteen during pneumonia, the pulse becoming one hundred and twenty to one hundred and thirty.

DR. H. C. HAVEN showed a specimen from a case of

CEPHALHÆMATOMA.

DR. FITZ mentioned the condition of the specimen as it appeared soon after the death of the infant. The unusually small quantity of blood present, considering the area of detachment, was specially noticeable, and permitted a relatively close contact between membrane and bone. Osseous scales were to be found in the detached periosteum as well as the bony ring at the attached margin, both giving evidence of the rapidity of bone growth at this early period of life.

The sudden disappearance of the larger part of the contents of these tumors was, to the best of his recollection, a very unusual event in their history. Although a discoloration of the skin might well result from the rapid absorption of large quantities of blood-coloring matter, he thought it unlikely that such absorption should give rise to disturbance of nutrition. As a rule weeks and months elapse before the contents of these tumors are removed without operative interference, and most physicians would be pleased to see a more rapid disappearance. A septic poisoning as a result of opening the sac has often arisen, but he was unaware of any instance of injurious effects from the absorption of the contents of a cephalhæmatoma which had not been tampered with.

The usual and most satisfactory explanation of the origin of these tumors was the mechanical theory. According to this the act of expulsion of the fœtus caused a partial detachment of the dura, and the hæmorrhage from the ruptured vessels took place after the birth of the child. This view was supported by the absence of any evidence of pathological causes acting during intra-uterine life, and was not satisfactorily opposed by the occurrence of the tumor in cases of rapid delivery or of breech-presentation.

Recent Literature.

Elements of Human Physiology. By HENRY POWER, M. B. Lond., F. R. C. S. Illustrated with Forty-Seven Engravings. Philadelphia: Henry C. Lea's Son & Co. 1884. Small 8vo. 389 pages.

This handy little book is a companion volume to Klein's Histology, which was recently noticed in this journal. As other complementary volumes treat of Clinical Chemistry, Physical Physiology, and Comparative Anatomy and Physiology, much that the student requires is omitted in the volume before us. At the same time not a little is apparently retained which ought to have fuller treatment, and perhaps gets it elsewhere. The result is a convenient and pleasant aid to the intelligent pupil cramming for an examination. The defects of the book are those common to all small physiologies which are not really elementary.

Power's Physiology may also be recommended as an agreeable syllabus to a good course of lectures which should correct some of the views presented that are inexact or only historically interesting. It suffices here to note in this connection: the ozone theory of the blood-gases (page 22), the influence of a change of one per cent. in the oxygen of the air (page 69), and the antizymotic properties of potassium sulpho-cyanide (page 103). The account of the localization of brain function (pages 260–263) will mislead the trusting reader.

The printing is excellently done, and there is a pretty full index. In this we miss "Sleep" (page 267), and note that curare is indexed as "Woorara," although the former name is preferred in the text. The chief misprint which has attracted attention is "quarrversuch" (page 233). Here, too, the suggestion may perhaps be permitted that it is high time to substitute "katelectrotonus" for the carelessly formed "cathelectrotonus."

In the account of muscular contraction (page 194) our author remarks: "There is no short term in English to designate the sudden, short, and transient shortening which is termed by the French a *sécousse*, or shock, and by the Germans a *zuckung*, or convulsion." Amory's translation of Küss's Physiology has "jerk" for this phenomenon, but the word is not altogether a happy one. Some years ago Dr. C. S. Minot, in his Experiments on Tetanus,[1] proposed and used "twitch" as an exact equivalent of "zuckung." This has always seemed to us a most felicitous suggestion and worthy of general adoption.

In the chapter on Food we are informed (page 86) that alcohol "in small quantities and in a diluted condition probably does little or no harm, but taken in excess it causes exhaustion and leads to poverty, and vice, and misery." This, as well as the remark on masturbation (page 328), does not, we submit, belong to the proper Elements of Human Physiology.

In a word, the book before us is a good one, — almost a very good one. Whoever reads it with care will learn *multa* if not *multum*.

The Australasian Medical Directory and Hand-Book. Edited and Compiled by LUDWIG BRUCK. First Year of Publication. Sydney: Published at Australasian Medical Gazette Office. London: Baillière, Tindall & Cox. 1883.

This Directory and Hand-Book furnishes a great deal of information concerning the field it professes to cover. Besides a list of nearly 1700 legally qualified medical practitioners, resident in the colonies, their names and addresses, qualifications, past and present appointments, it contains a general gazetteer of 1000 post towns, together with all particulars that may be useful to a medical man, combined with a local directory of all resident physicians, surgeons, veterinary surgeons, and dentists, as well as a list of benevolent and similar institutions. It also contains an abstract of all the principal laws affecting the medical profession throughout Australasia, an intercolonial official medical directory, a list of medical and other scientific societies, the regulations and by-laws of colonial universities, a list of coroners, a recognized scale of medical and surgical fees, a short history of 130 universities in all parts of the world, a list of upwards of 200 periodicals devoted to medicine, surgery, and allied sciences that are published in the English language throughout the world, an obituary, and many other features, the mere enumeration of which would fill a column. We understand the book is not only full but accurate.

[1] Journal of Anatomy and Physiology, vol. xii.

Medical and Surgical Journal.

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"TRANCE" AS A SYMPTOM OF HYSTERIA.

One of the most interesting cases of continued lethargy or "trance" yet reported is that which came recently under the observation of Professor Gairdner, of Glasgow.[1] The case, briefly stated, was that of a woman who, after childbirth, showed a hysterical tendency, which culminated after eleven weeks in a lethargic sleep, which became gradually so profound that the most powerful external stimuli failed to produce the least sign of consciousness. The limbs lay flaccid without sign of cataleptic rigidity, the evacuations were passed in bed, the flesh wasted away, and the patient was preserved from inanition only by continued feeding with the stomach tube. This condition lasted nearly three months, and after recovery the patient professed entire unconsciousness of the events occurring during her protracted sleep.

The report of the case and the comments of Professor Gairdner upon it well illustrate the encroachment of science upon the domain of popular superstition. In earlier times hysterical and epileptic convulsions were considered due to the possession of the patient by devils, while their cessation was generally attributed to miraculous interposition. If such every-day phenomena as these have been in times past referred to supernatural agencies, who can wonder that the word "trance" is even now surrounded with uncanny associations, and that the popular mind, ever on the alert for the marvelous, should still cling to the idea that nature has in this case at least suspended her laws, and that spirits from some less tangible world have taken possession of the sleeper. The tendency of scientific research is to show that miracles do not exist, and the observer, trained by such research, is led to attribute the phenomena not yet understood to some law or laws not yet discovered, and the non-scientific world seems to be tending gradually towards the adoption of the same view.

Not many centuries ago multitudes of insane and epileptic patients flocked to the little town of Gheel, in Belgium, to be treated by the priests, whose exorcisms and prayers had gained a wide reputation for their potency over demoniacal possession. The priest has now retired in favor of the physician, and the town has become one vast lunatic asylum, with its headquarters in a new brick building with modern improvements, while in the comparatively deserted old chapel are still shown the chains once used to confine the restless "possessed" while awaiting their turn at the altar.

Convulsions, paralyses, and other symptoms occurring in epilepsy, insanity, and other *comparatively* tangible forms of disease, have been now long recognized as arising from definite disturbance, organic or functional, in the nervous system; and however obscure and difficult of analysis that disturbance may be, no intelligent medical man would throw doubt upon its existence. With hysteria the advance has been slower, and until a comparatively recent date the medical world has contented itself with substituting for the objective devil of the ancients a subjective devil, called variously "imagination" and "desire to be interesting." These and similar terms, implying either self-deception or the deception of others on the part of the patients, have long been supposed not only to represent the state of mind of the sufferer but also the origin of the whole trouble; and efforts to unravel the skein of symptoms, and to discover the laws in accordance with which they appear, have until recently generally met with indifference if not with ridicule on the part of the profession at large.

It cannot be denied that many if not most hysterical patients exhibit mental and moral obliquity, and that among the evidences of this obliquity appear not infrequently attempts at deceit and signs of disordered imagination; but the tendency of recent investigation is to show that these mental states, instead of causing the whole trouble, are merely symptoms (like, for example, the paralyses and the convulsions) of a disorder in the central nervous system not less real than that of epilepsy, although its exact pathology, like that of epilepsy, is still a matter of conjecture. Certainly some force other than simulation is required to explain such a symptom as persistent cramp holding a young girl's hand or foot for months in a position which the strongest man could not maintain for half an hour, while the absolute recovery of such a hand or foot forces us to class the case under hysteria rather than any organic disease. Such symptoms, as well as the lethargic and cataleptic states, to which hysterical patients are prone, seem, on careful study, to result from the same forces as obtain in health, and to work under the same laws, the difference being one of degree, not kind. For example, the convulsions of hysteria may in a general way be safely regarded as the exaggeration of the lower (cerebral and spinal) reflexes, combined, perhaps, with the depression of the higher cerebral control.

The phenomena of so-called magnetism have long been imposed upon the credulous public, but science has deprived them of much of their mystery, by showing that the same results may be brought about by a single individual upon himself. It has been found, for example, that fixing the sight and attention for some time upon a shining object may produce, in the comparatively healthy individual, a state of catalepsy which will persist after the withdrawal of the object of contemplation. Whatever may be the exact nature of this phenomenon, there can be no doubt that it is en-

[1] Lancet, December 22, 1883, January 5, 12, 1884.

tirely a subjective one; and perhaps we should not fall far from the truth in assuming that continued fixation of the mind on any object is capable of suspending, to a varying degree, the inhibition which the higher cerebral centres exert in health over the lower reflexes directly associated with the movements of the body.

In the case of persons in this state, the change from catalepsy to lethargy, or again to somnambulism, may be brought about by the application of various stimuli; and experiment has shown that the same general laws apply to all "magnetized" subjects in various parts of the world. The degree of susceptibility to these influences varies among healthy individuals, but among hysterical patients this susceptibility is generally marked. A hystero-epileptic may often be thrown into a cataleptic state by the application of a tuning-fork to the forehead or by the sound of a gong.

Rude as the revelation may be to the sensitive believer in the supernatural, it seems probable that most of the mysterious sleepers, whose histories have been handed down to us surrounded by tender associations, religious and sentimental, were simply highly susceptible and sometimes hysterical persons, subject to attacks of prolonged catalepsy or lethargy, the histories of which, translated into medical language of the present day, would be similar to that of the case reported by Professor Gairdner.

ENDOWMENT OF MEDICAL SCHOOLS: BEQUEST OF THE LATE DR. CALVIN ELLIS TO THE HARVARD SCHOOL.

THERE are no institutions in the country in regard to which the question of endowment has more importance than medical schools, and there are none for which less has been done by communities in general or which have been less the recipients of the bounty of individuals.

It is quite generally recognized now, even in our commercial age and country, that a purely commercial basis is not a suitable one upon which to build up the higher branches of learning and teaching; the necessary spur of competition which it supplies can be otherwise provided by better motives; and the day is evidently remote where a stagnating ease and content will be fostered in our medical schools by the large revenues of invested funds. The Medical School of Harvard University and that of the University of Pennsylvania are the only two prominent schools which occur to our mind as owing their buildings and their revenues in any degree to public or private benefactions, and to these the Johns Hopkins School with its hospital will soon be added. It is in these schools that an effort is being made to elevate the system and standard of our medical education. But in each case the possession of a fine, commodious building brings with it not only increased facilities but increased expectations from friends and increased expenditures; and unless accompanied by endowments the erection of buildings, even when representing the generosity of benefactors, may prove a burden rather than an aid to higher aspirations.

It is, therefore, with very great pleasure that we submit to our readers the text of that portion of the will of the late lamented Dr. Calvin Ellis by which Harvard University will, under certain contingencies, as residuary legatee, become trustee for its Medical School of a sum of not less than $150,000. The clauses of the will referred to are as follows: —

"All the residue and remainder of the said trust property my trustees, in the event aforesaid, shall convey in fee-simple, transfer, and pay over to the said President and Fellows to hold the same as a permanent fund, and apply the net rents and income thereof and of all substituted property; in every year, after first deducting and accumulating in every year five per centum of such net income as an increase of the fund towards paying the salary of a professor of pathological anatomy. Provided, however, that if such professor would receive in any one year, if the whole of the said net income remaining after such deduction of five per centum were paid to him, a salary of more than $5000 for such year, arising from gifts, legacies, and other permanent endowments (including the income of this legacy), then, and in every such year, the amount paid him from the income of this legacy shall be reduced so that the total income from such sources shall be $5000 and no more. And if the income from gifts, legacies, and other permanent endowments, exclusive of the income of this legacy, shall amount in any year to $5000, then, and in every such year, the income from this legacy shall be withheld altogether from such professor. The amount so withheld, whether it be the whole or a part of the net income, after deducting five per centum, shall be applied to the salary of the professor of physiology, with the same provisions and limitations as those herein declared touching the salary of the professor of pathological anatomy. And any amount in every such year still remaining unapplied shall next be applied to the salary of the professor of anatomy with the same provisions and limitations as are herein declared touching the salary of the two professors first named. And if the whole or any part of such income still remains unexpended in any year, the same shall be expended in such year for such other purposes in the Medical Department of the said college as the said President and Fellows shall deem most useful."

By the eventual execution of these provisions Dr. Ellis's name would become associated through the succeeding years with the best fruits of the work of a school whose highest interests it was his aim during his life to aid in advancing. Moreover, at the same time that the Harvard Medical School profits by a really handsome and useful endowment, the community at large gains in more ways than one, not the least of these being an example which others not directly connected with our profession should be easily tempted to imitate. In no way can money be made to yield a better interest than in securing for those who seek to enter the medical service of a community all facilities for the best possible training, for "sooner or later

most persons must call upon medical art, for themselves or others, in one of those moments when the physician or surgeon is looked to as an earthly savior." And again we may emphasize what has been said by quoting other words from a communication of Dr. O. W. Holmes to the *Boston Advertiser*, two years since, upon this very subject: —

"A school which depends for its existence on the number of its students cannot be expected to commit suicide in order to satisfy an ideal demand for perfection. Any institution which is essentially dependent on the number of paying students it can draw must be tempted to sacrifice its higher aims to popularity. No high standard can be reached under such circumstances, and the only way to insure the independent action of a school which aims at teaching the whole country by example is to endow its professorships, so that the very best and highest grade of instruction, and not that which is popular, because it is easy and superficial, may always be given from its chairs, whether the classes be large or small. A small number of thoroughly accomplished medical graduates, their knowledge based on sound scientific acquirements, and made practical by assiduous clinical observation and teaching, will be worth more to the country than twice or thrice the number of half-taught, hastily-taught, practitioners. A series of such classes will, in the course of a single generation, elevate the whole professional standard as they go forth, year after year, missionaries in the cause of health, soldiers, and, if need be, martyrs, in the unending battle with disease and its causes."

A NEW ENGLAND CREMATION SOCIETY.

The New England Cremation Society was organized in Boston on the 11th instant, an act of incorporation having been granted not long since. By-laws were adopted and officers chosen. The fee for membership, $1.50 per month, or $12 in one annual payment, insures each member cremation, the only other cost being the delivery of the remains to the crematory. The Society in this city was organized under the clause whereby societies "religious, scientifical, and medical," can issue stock at $25 per share. The capital stock of the company is to be $20,000, and it is the intention to establish a crematory at the earliest opportunity. A site had already been determined on in the suburbs of the city, and situated in most attractive surroundings. Some four acres of land will be, it is understood, taken for the purpose, and will be laid out in a becoming manner. A handsome building will be constructed, containing a chapel, where religious exercises may be held while the body is being incinerated in the retort below. The plan also contemplates a room for autopsies, and others for the keeping of bodies a certain length of time. This latter provision is with the view of easing the minds of those who might wish cremation, but who have a dread of either being buried or burned alive. The Society and its crematory will be open to all classes, irrespective of creed or color, and any services at the chapel will be in accordance with the wishes of the relatives, but free of expense to the Society. The crematory will be the fourth (?) in the world, and it is understood that use will be made of the most advanced ideas already embodied in similar institutions at Gotha, Milan, and in Washington, Penn. As the Society represents New England at large, it is possible that the anticipations of its founders for a fair and growing support may be realized.

RESTRAINT AT THE UTICA INSANE ASYLUM.

In the case of Evan D. Hughes, a patient in the State Insane Asylum at Utica (of which Dr. John P. Gray is the medical superintendent), who died there on the 1st of February, the coroner's jury rendered a verdict to the effect that he came to his death by reason of injuries inflicted on him by three attendants, while engaged in restraining the patient, who was in a state of frenzy, and that the acts of the attendants were in violation of the rules of the institution, and without excuse or justification. In consequence of this verdict the three attendants have each been held in $1000 bail on a charge of manslaughter in the second degree. A member of the coroner's jury makes the statement, however, that a majority of the jurors were of the opinion that the attendants acted in self-defense, and signed the verdict only on the assurance of the District Attorney that it would not hold the defendants. The case has also resulted in the appointment from the State Legislature of a special committee of members of the Assembly to make an investigation of the Utica Asylum and its management.

If such investigation is thought desirable under these circumstances, we hope it may be conducted so as to exclude, as far as possible, the sensational element which has been already too much "worked" in the discussion of asylum management.

MEDICAL NOTES.

— The housemaids are threatened with being deprived of their ancient right of nominal association with bursitis patellæ. Those who have observed how the scrub-woman of the present day does her office have had reason to fear that these leisurely wielders of the long-handled mop would ere long have to abdicate their traditional position in surgical nosology. And now we find that their successors are, of all people, — the clergy! In these days of modern conveniences one can hardly see how the upholstered *priedieu* and tufted hassock can allow the most genuflexionary clerical to develop a hygroma. We have it, however, on the authority of a correspondent of the *Lancet*, who is the attendant of a French Jesuit college in Ireland, that inflammation of the patellar bursa is not at all uncommon. He says that there are about one hundred members of the college, the majority of these being students varying from eighteen to twenty-two years of age, and the average number of cases of

affections of the bursa patellæ has been about five per annum.

— The *Medical and Surgical Reporter* contains the following formula for home-made koumyss, furnished by a druggist, who claims that it is more convenient than any other for domestic purposes: Take of milk one quart, one fourth of a teaspoonful of bicarbonate of soda, one ninth of a cake of compressed yeast, two tablespoonfuls white sugar, three tablespoonfuls glycerine. Rub the yeast up smoothly with a small portion of the milk, and mix all together in a quart bottle, cork tightly, and keep in a temperature from 80° to 100° F. for six hours, then in ice-box for twelve hours, and use.

NEW YORK.

— Mr. and Mrs. Percy R. Pyne, of New York, have presented $100,000 in cash to the Trustees of the Moses Taylor Hospital at Scranton, Penn., to be added to the fund bequeathed for the erection and endowment of the institution. Mrs. Pyne is a daughter of the late Mr. Taylor, who devised $250,000 for the purpose, and this additional gift of $100,000 will enable the managers to carry out the design of the founder, in which there has been a delay on account of the fact that the fund was found insufficient for the completion of the plans adopted.

— The late Dr. Beverley Livingston, a graduate of the Sheffield Scientific School in 1874, requested before his death, last year, that his scientific collections, consisting of a large number of microscopic slides and other specimens, together with the sum of $3000, should be presented to that institution, and his wishes have now been carried out by his father.

— The monthly meeting of the Medico-Legal Society of February 13th was principally devoted to a discussion of a paper recently read before the Society by Dr. J. G. Johnson, on Concussion of the Spine in Railway Injuries.

— At the meeting of the Society of Medical Jurisprudence and State Medicine, held February 14th, Prof. Jarvis S. Wight, of the Long Island College Hospital, read a paper entitled, A Plea for the Just Treatment of Criminals.

— At the annual meeting of the Kings County Pharmaceutical Society, held in Brooklyn, February 13th, a committee was appointed to confer with the authorities of the Long Island College Hospital in reference to the establishment of a school of pharmacy at that institution.

— The Trustees of the College of Physicians and Surgeons have elected Dr. John C. Dalton, for so many years Professor of Physiology, President of the College, in place of Dr. Alonzo Clark, who has resigned. Dr. John G. Curtis now holds the chair of Physiology.

— On the occasion of the fourteenth annual dinner of Bowdoin College Alumni Association of New York, held at Delmonico's February 14th, Dr. Fordyce Barker was reëlected President.

— The turf surrounding the mansion of Mrs. A. T. Stewart, on Fifth Avenue, is said to have been taken from the grounds of the old New York Hospital, at Broadway and Pearl Street, and to be about one hundred years old. When the hospital buildings were torn down some years ago, Mr. Stewart purchased the sod from the Governors, and had it relaid about his new house, which was then in course of erection.

PHILADELPHIA.

— The County Medical Society has for several meetings devoted considerable time to the discussion of the clinical relations of the bacillus tuberculosis. The subject was introduced by a paper read by Dr. H. F. Formad, who spent some time last summer in Koch's laboratory investigating the bacillus theory of consumption. In this communication he admitted the frequent existence of a bacillus in tubercular diseases, but denied that it acted as the sole cause of consumption; in a person already predisposed to tuberculosis, or susceptible to the disease, the bacillus may act as an irritant, and hence in such a case would be the exciting cause of the disease. He contended that consumption is a disease which may be excited by various irritants, of which the bacillus is simply one; for the production of the disease there is required (1) a definite soil, (2) an indefinite irritant. Tubercle he defined as an inflammatory new formation in a special individual or tissue. Testing the theory by clinical experience, he claimed that consumption was neither specific nor contagious; that no cases of well-authenticated contagion which would bear scientific analysis had been reported. As the rule, the predisposition to tuberculosis consists in a peculiar arrangement of the lymph spaces which is met with in certain individuals, and in certain animals, forming what is known as the strumous diathesis; the exception is an inflammation of a serous membrane, which may give rise to tubercle directly, possibly by the establishing of an artificial scrofulous anatomy by blocking up the lymph spaces by fibrine and molecular débris; this, then, would be a mechanical and not an infective process.

In the discussion Dr. E. O. Shakespeare, who will also discuss the subject at the next meeting of the American Medical Association, defended Koch's views, and stated that Dr. Formad had confounded the predisposing with the exciting cause of phthisis; he dissented entirely from the views expressed by the lecturer. Dr. Longstreth believed that too much stress had been laid upon the bacillus, which he could not accept as the sole and sufficient cause of consumption. A number of others expressed just as discordant opinions, which succeeded in establishing at least one fact, that is, the question is still in a thoroughly unsettled condition, and will require time and further observation for its solution.

— Several new societies have been started with more or less promise of a successful career with the beginning of the year. Prof. S. D. Gross presided at a meeting to organize a society for the study of forensic medicine; about fifty physicians and thirty members of the Philadelphia Bar Association have signified their intention of joining the Society, which held a meeting for the election of officers on the third Tuesday of February. A Neurological Association

has just been formed, with Dr. S. Weir Mitchell as president.

— The reception given to Dr. Theophilus Parvin by the Alumni Association of the Jefferson Medical College, on January 28th, was attended by many of the resident graduates of the school and a number of invited guests. It was a very successful and thoroughly enjoyable affair, and gave many an opportunity of making the acquaintance of the recent acquisition to the Faculty, who has already made many friends.

— The annual meeting of the Alumni Association of the Medical Department of the University of Pennsylvania was held January 31st, when Dr. William Hunt, President of the Association, delivered an address abounding in wit and practical wisdom, and full of wise saws and modern instances.

— Philadelphians are subscribing to the Sims memorial. After this fund is complete it would be a very becoming thing for some New York gentleman to suggest that we erect a monument to Isaac Ray and to Thomas S. Kirkbride, or to Washington L. Atlee, or Joseph Pancoast. Are there greater names than these to be found in the annals of American medicine?

— At the last meeting of the College of Physicians Dr. Horatio C. Wood read a paper on the Clinical Aspects of Brain Syphilis, Dr. Wilson contributed a Further Note on the Specific Treatment of Typhoid Fever, and Dr. Harrison Allen described a New Method of Studying the Motions of the Soft Palate.

Correspondence.

RENEWED REQUEST FOR EMBRYOLOGICAL MATERIAL.

Mr. Editor, — Last autumn you kindly published a request for me, stating that I desired to obtain a large embryological material, and I have since received a number of specimens from various gentlemen, to whom I take pleasure in now publicly offering my thanks. Will you not permit me to again renew my request for embryos of all ages, and to add thereto the statement that those which are received in a fresh state within a few hours after the delivery are by far the most valuable, as only by the immediate preservation of the parts is it possible to obtain the nervous and epithelial tissues in a condition suitable for microscopic examination. I believe I can assure the contributors to my collection of fœtuses that all the specimens received will be thoroughly utilized, and be of great value not only to myself but to a large and increasing number of students also. I am preparing a treatise on human embryology, and desire to base the work as far as possible upon original observations on *human* development. Hitherto embryologists have worked principally upon animals.

I shall be very glad to meet any expenses incurred in sending specimens. Where it is impossible to send them in the fresh state it is best to place them in alcohol diluted with one third of its bulk of water.

Yours very truly,

Charles Sedgwick Minot.

Harvard Medical School, *February* 14, 1884.

Miscellany.

THE ORTHOPÆDIC SURGEON AS A MECHANICAL ENGINEER.

Dr. Newton M. Shaffer, in a recent paper on the present status of orthopædic surgery (*New York Medical Journal*, January 26, 1884), takes strong ground as to the necessity for the practitioner of this specialty to furnish specific details of every appliance which he requires, and if necessary to be able to make it, at least to *know how* to make it. He claims that every scientific orthopædist, competent to give to his patients the skill which they have a right to demand, should become responsible for everything pertaining to the manufacture of the instruments to be used. On this point he says: —

"In order to satisfactorily carry out the system of prescribing apparatus for deformities, the instrument maker should be placed in the same category as the pharmacist, and should supply apparatus for deformities only upon a prescription, — that is, a carefully executed diagram of the apparatus needed. But how is an educated orthopædic surgeon to execute this plan? While orthopædic surgery has advanced to the dignity of a well-recognized place in general surgery, the facilities for filling a mechanical prescription are in some respects no better than they were fifty years ago. As a rule, the instrument maker who now fills the prescription of the orthopædic or general surgeon is not unwilling to treat deformity himself, and it not infrequently occurs that he makes suggestions to the patients that are sent to him. There is, I regret to say, some excuse for this, for it has sometimes happened that the instrument maker has a better idea of what is needed than the surgeon who sent the patient to him, for the reason that orthopædic surgery is not, as a rule, taught in our medical schools, and the generally lax way in which chronic deformities are referred to leaves the newly-fledged graduate utterly unprepared to treat them, especially in a mechanical sense. Nor is it at all unusual for the instrument maker to be called in a kind of a consultation by the surgeon, to devise some sort of apparatus to accomplish an ill-defined end in a given case of deformity or disease. Still further, there are scattered throughout the country various agents of the prominent instrument-making firms, druggists, for example, who prescribe for the most serious cases in orthopædic surgery and order an apparatus from a distance about which they know little or nothing, except that gained from the catalogues."

As a contrast to this method of treatment and to the practice of those surgeons who, after making a diagnosis, turn the case over to a mechanic, as if there were something degrading and unprofessional in attending personally to the details of the mechanical department of orthopædic work, he describes the method pursued in the New York Orthopædic Dispensary. Here there is, in direct connection with the institution, a fully equipped mechanical room in which four or five men are constantly employed making apparatus directly under the instructions of the surgeons; no apparatus is made without a drawing, and careful measurements accompanied by actual outlines, when necessary, are given with every order; no repairs are made except by personal instruction of the surgeons, accompanied by drawings if necessary. A similar shop, supplied with steam power, has been established in connection with the University Hospital at Philadel-

phia, where apparatus is made after drawings by the surgeons and under their supervision. We are informed that the entire cost of the shop did not exceed $2000, which includes a building erected for the purpose, and that it is now nearly self-sustaining, actual cost of production only being charged to those patients who are able to pay it.

RECENT METHODS OF TREATING COLD ABSCESSES.

PROFESSOR BILLROTH thus writes on the above subject (*Medical Press and Circular*, January 16, 1884): When we turn our thoughts to a cold abscess we must first of all place before ourselves the questions, Why is not the contained fluid absorbed? and why are we compelled either to await its opening or open it ourselves?

Exudations that arise in the course of acute inflammations, or transitory disturbances of circulation, are indeed usually absorbed; if the general condition of the body is in other ways normal, the absorption of the fluid is the ordinary process. If you have a clear conception of the arrangement of the lymphatic vascular system you will comprehend this, for the lymphatic vascular system sucks up all these exudation products like a sponge, and carries them all back into the blood channels. Under what conditions, then, does this resorption fail to take place? (1.) You may say first that absence of open lymph vessels is a very important cause, and that is just the case with the capsule that in the course of time forms around these abscesses. The walls of the veins can, it is true, take up some of the fluid, but it is the open lymph vessels that are most concerned in such absorption. But even when such open lymph courses are present, they may become closed under certain circumstances, as by an exudation that becomes clotted, in which fibrine forms quickly, and in which the clotting may be continued into the lymph vessels, or into the interstitial structural interspaces. This is the case to a great extent in croupous and diphtheritic exudations. (2.) The resorption is dependent on the degree of concentration of the fluid. If the fluid is to be resorbed, its concentration must be less than that of the blood. That is not the case in cold abscesses. Moreover the various regions of the body show great differences in their power of resorption; the pelvis is the most favorable for resorption; the most unfavorable is the pleural cavity. How can we overcome these difficulties therapeutically? (1.) The first method would be the removal of the fluid; but experience teaches that the fluid may be removed for the moment, but that the exudative property of the structure does not cease; on the contrary, the cavity refills with uncommon rapidity with pus, this refilling being principally caused by the fact that by removal of the fluid the vessels in the abscess walls are subjected to a greatly reduced pressure. (2.) Is it possible by certain irritating agents to excite a greater vascularity in the walls of the abscess? With this object in view tincture of iodine has been injected, for the purpose of exciting an inflammation, whereby an exudation is certainly set up, but which, in consequence of the higher vascularity thus induced, is readily absorbed, with the result that the cavity shrinks up. (3.) This method was succeeded by the opening of the abscess under strict antiseptic precautions. Not only is the pus evacuated, but the abscess cavity is carefully scraped with the sharp spoon, after which an antiseptic dressing is applied. In this way the walls of the abscess, which consist of a mass of soft granulations, are removed as far as the healthy tissues, whereby, by means of a light compress, healing by first intention has been achieved. Indeed, by this method good results have been obtained in many cases, but it is one that requires to be carried out with great accuracy. Since the introduction of iodoform we have strewn the scraped-out cavity with iodoform in powder, and brought the edges together with the exception of the openings left for drainage. By means of iodoform sepsis is to a great extent avoided, and under certain circumstances granulations may spring up under which healing rapidly takes place. (4.) Quite recently we have attempted another method, namely, puncture of the abscess, and subsequent injection of an emulsion of iodoform consisting of ten parts of iodoform to 100 parts of glycerine. The emulsion must be well shaken up before using, and then, according to the size of the abscess, twenty to thirty grammes are to be injected. In most of the cases in which this method has been attempted the course has been free from reaction, only moderate swelling has taken place, and but little pain has been present. This, however, would only indicate that the treatment has done no harm; it is also desirable that it should bring about the shrinking of the abscess, and that the fluid remaining in the cavity should be absorbed. As a matter of fact, the results in some cases were exceedingly favorable, but further experience is necessary to show whether the iodoform emulsion is still to be continued. Generally speaking, I should advise you, unless there should be some reason for it, not to open the cold abscess, but to allow it to open spontaneously, especially if you cannot watch over your patients closely. You can then calculate with certainty that the pus will escape without fever and without further reaction, whilst at the same time the entrance of air is completely avoided. In such cases the mechanical relations are extremely favorable, even wonderfully so, without our being able to give an explanation of them, for it happens, for example, that an abscess bursts into the bladder or rectum, and in such cases I have never seen urine or intestinal gases enter the abscess cavity. Under strict antiseptic precautions, and under your constant supervision, you may open the abscess, especially if you suspect with some certainty that you can easily reach the bone from which the abscess springs, or if it causes by its great expansion compression of the neighboring structures, and in consequence of this gives rise to various difficulties.

THE SACRED WHITE ELEPHANT.

THE Siamese minister in London announces, *apropos* of Mr. Barnum's white sacred elephant from his country, that the existence of sacred elephants, white or black, is altogether unknown in Siam. The dermatologists of London, on the other hand, say that such pretensions — and they are limited — as the beast can make to being white are based on a disease, leucoderma. Robbed of the attributes of sacredness and whiteness it becomes simply an elephant with a disordered skin.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 9, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diphtheria and Croup.	Typhoid Fever.	Scarlet Fever.
New York	1,340,114	627	252	17.60	13.60	6.38	.32	2.72
Philadelphia	927,995	397	150	14.75	12.50	.75	3.00	4.50
Brooklyn	644,526	214	93	14.40	15.75	7.20	—	1.80
Chicago	632,100	195	92	17.85	8.67	5.12	2.56	2.04
Boston	423,800	204	67	15.68	18.13	4.21	2.45	2.94
Baltimore	408,520	170	63	41.16	11.76	8.82	1.17	2.94
St. Louis	400,000	156	61	21.12	14.72	8.96	1.92	2.56
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	157	30	21.66	14.01	1.27	5.73	.64
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	100	34	17.00	19.00	—	1.00	9.00
Pittsburg	180,000	51	19	17.64	11.76	3.92	9.80	3.92
Milwaukee	142,400	42	25	14.40	7.20	7.20	—	4.80
Providence	119,405	40	16	12.50	5.00	5.00	2.50	2.50
New Haven	62,882	25	3	16.00	16.00	4.00	—	8.00
Nashville	54,400	24	9	16.64	12.48	—	4.16	—
Charleston	52,286	32	10	9.39	25.04	—	—	—
Lowell	71,447	24	11	—	12.48	—	—	—
Worcester	69,442	22	9	18.20	18.20	12.66	—	—
Fall River	62,674	22	7	12.66	25.33	9.11	4.55	—
Cambridge	60,995	23	8	17.40	21.75	13.05	4.35	—
Lawrence	45,516	16	8	25.00	12.50	12.50	—	—
Lynn	44,895	12	2	8.33	25.00	—	—	—
Springfield	38,090	9	2	33.33	22.22	22.22	11.11	—
Somerville	31,350	6	1	—	16.66	—	—	—
Holyoke	30,515	7	3	—	—	—	—	—
New Bedford	30,144	12	2	16.66	—	—	16.66	—
Salem	29,503	17	4	17.66	5.88	5.88	5.88	—
Chelsea	24,347	9	2	22.22	11.11	22.22	—	—
Taunton	22,693	5	1	40.00	—	40.00	—	—
Gloucester	21,400	9	3	22.22	33.33	11.11	—	—
Haverhill	20,905	6	3	50.00	16.66	16.66	—	16.66
Newton	19,421	7	1	14.28	14.28	—	—	—
Brockton	18,323	4	2	25.00	—	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	4	2	—	—	—	—	—
Fitchburg	13,433	3	0	—	33.33	—	—	—
Seventy-six Massachusetts towns	258,799	77	14	5.19	21.76	5.19	—	—

Deaths reported 2725 (no reports from Cincinnati and Buffalo): under five years of age, 1007: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 466, consumption 434, lung diseases 347, diphtheria and croup 151, scarlet fever 72, diarrhœal diseases 55, typhoid fever 47, measles 30, malarial fevers 26, whooping-cough 25, cerebro-spinal meningitis 22, puerperal fever 14, erysipelas 14, small-pox 10. From *diarrhœal diseases*, New York 19, New Orleans nine, St. Louis seven, Boston six, New Haven five, District of Columbia three, Baltimore two, Brooklyn, Chicago, Providence, Nashville, and Charleston one each. From *measles*, District of Columbia nine, New York and Baltimore seven each, Brooklyn three, Philadelphia, St. Louis, Nashville, and Charleston one each. From *malarial fever*, New Orleans nine, New York eight, Brooklyn three, Chicago, Baltimore, and St. Louis two each. From *whooping-cough*, New York 10, Philadelphia, Brooklyn, and Boston three each, Chicago, Baltimore, St. Louis, Worcester, Gloucester, and Haverhill one each. From *cerebro-spinal meningitis*, New York nine, Chicago four, Philadelphia two, New Orleans, District of Columbia, Lowell, Lawrence, Salem, Newton, and Brockton one each. From *puerperal fever*, Chicago five, New York and Boston two each, Brooklyn, Baltimore, Milwaukee, Fall River, and Springfield one each. From *erysipelas*, Chicago three, Baltimore, New York, and New Orleans two each, Philadelphia, Brooklyn, Boston, St. Louis, and Lynn one each. From *small-pox*, New Orleans nine, Nashville one.

Three cases of small-pox were reported in St. Louis; scarlet fever 51, diphtheria 24, typhoid fever eight, and measles two in Boston; scarlet fever 22 and diphtheria six in Milwaukee.

In 95 cities and towns of Massachusetts, with an estimated population of 1,277,688 (estimated population of the State 1,922,530), the total death-rate for the week was 19.26 against 16.59 and 17.78 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending January 26th, the death-rate was 20.3. Deaths reported 3410: acute diseases of the respiratory organs (London) 360, whooping-cough 130, scarlet fever 97, measles 86, fevers 48, diarrhœa 27, diphtheria 26, small-pox (London and Birmingham two each) four. The death-rates ranged from 15 in Norwich to 26.8 in Manchester; Bradford 15.9; Leicester 16.9; Bristol 17.7; Blackburn 18.4; Sunderland 19.1; Nottingham 19.3; Birmingham 19.6; London 19.9; Liverpool 22; Sheffield 24.1; Leeds 25.5. In Edinburgh 18; Glasgow 22.7; Dublin 24.5.

For the week ending January 12th, in 170 German cities and towns, with an estimated population of 8,688,664, the death rate was 25.5. Deaths reported 4269; under five years of age, 1909; consumption 647, lung diseases 492, diphtheria and croup 271, scarlet fever 75, measles and rötheln 71, typhoid fever 67, whooping-cough 54, puerperal fever 35, small-pox (Lubec one) one. The death-rates ranged from 11.8 in Wiesbaden to 52 in Duisburg; Königsberg 33.5; Breslau 30; Munich 30.8; Dresden 34.2; Berlin 24.9; Leipzig 26.9; Hamburg 27.3; Cologne 24.1; Frankfort a. M. 18.5; Strasburg 23.4.

For the week ending January 26th, in the Swiss towns, there were 28 deaths from consumption, lung diseases 27, diphtheria and croup 10, puerperal fever four, whooping-cough four, scarlet fever three, measles two, small-pox one, typhoid fever one. The death-rates were, at Geneva 20.6; Zurich 29.5; Basle 26.3; Berne 21.1.

The meteorological record for the week ending February 9th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Feb., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 3	30.329	30	36	25	82	86	82	83	SW	NW	NW	4	24	12	R	F	C	—	—
Mon., 4	30.354	22	32	13.5	85	60	82	95	NW	SW	SW	1	10	9	F	O	C	—	—
Tues., 5	29.869	36	36	25	82	86	82	83	SW	E	O	6	7	0	F	O	O	—	—
Wed., 6	29.869	50	56	44	93	90	100	94	SW	SW	SW	3	10	6	O	R	R	—	—
Thurs., 7	30.226	40	51	32	92	94	78	88	E	NW	NE	1	2	12	R	O	O	—	—
Fri., 8	30.438	25	35	18	82	100	98	93	E	N	N	27	18	11	O	S	O	—	—
Sat., 9	30.121	32	37	21	94	88	89	90	N	S	W	3	8	12	O	O	C	—	—
Mean, the Week.	30.172	33.6						89.7										60.14	.62

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM FEBRUARY 9, 1884, TO FEBRUARY 15, 1884.

To be assistant surgeons, with the rank of first lieutenant, to date December 3, 1883: —

William D. Dietz, Walter W. A. Fisher, William Stephenson, Adrian S. Polhemus, John L. Phillips, Reuben L. Robertson, William C. Borden, Edgar A. Mearns, Guy L. Edie, William D. Crosby, William L. Kneadler, Charles M. Gandy, Charles S Black, James E. Pilcher, Alonzo R. Chapin. S. O., A. G. O., Washington, February 11, 1884.

BREWSTER, WILLIAM B, first lieutenant and assistant surgeon. Resignation accepted to date February 7, 1884, S. O., A. G. O., Washington, February 11, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING FEBRUARY 16, 1884.

COUES, S. F., medical director, to the Naval Medical Examining Board, Philadelphia, March 3d, as the relief of Medical Director P. J. Horwitz, who retires on that date.

SUFFOLK DISTRICT MEDICAL SOCIETY. SPECIAL MEETING. — The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, February 27th, at 7.45 o'clock. Dr. J. Cheston Morris, of Philadelphia, will present a paper on The Milk Supply of Cities and Large Towns. Mr. Lloyd F. Abbott will read a paper on The Milk Supply of Boston and the Benefit to be Derived from the Spaying of Cows.

ALBERT N. BLODGETT, *Secretary.*

ERRATUM.

BOSTON, *February* 15, 1884.

MR. EDITOR, — It may seem a small matter, but, in quoting Wordsworth, I want to avoid errors. "The child is father *of* the man," not "*to*," as given in your last number, is the correct line.

Yours truly,

H. I. B.

BOOKS AND PAMPHLETS RECEIVED. — The Surgical Treatment of Tumors and other Obscure Conditions of the Bladder. By Walter Whitehead, F. R. C. S. E., F. R. S. Edin., Surgeon, Manchester Royal Infirmary and the Manchester and Salford Lock and Skin Hospital, and Bilton Pollard, M. D., B. S., F. R. C. S., Resident Surgical Officer Manchester Royal Infirmary. (Reprint from the Lancet.) London: J. & A. Churchill. Manchester: J. E. Cornish.

On a New Mode of Operating for Fistula in Ano. By Edward W. Jenks, M. D., LL.D., of Chicago, Ill. (Reprint from Vol. VIII. Gynecological Transactions.) 1883.

First Annual Report of the New York Skin and Cancer Hospital, No. 243 East Thirty-Fourth Street, with Act of Incorporation and By-Laws. New York. 1884.

Medical Thoughts of Shakspere. Compiled by B. Rush Field, M. D., Easton, Penn. 1884.

School Hygiene. By Charles J. Lundy, A. M., M. D., Professor of Diseases of the Eye, Ear, and Throat in the Michigan College of Medicine, Detroit. Read before the American Health Association. 1883.

Medical Symbolism. By T. S. Sozinskey, M. D., of Philadelphia. (Reprint from the Medical and Surgical Reporter.)

Ninth Report of the Salem Hospital, 1884.

Borderland Psychiatric Records. Prodromal Symptoms of Psychical Impairment. By C. H. Hughes, M. D., St. Louis. (Reprint, Alienist and Neurologist, January, 1884.)

The Opium Psycho-Narcosis. Chronic Meconism or Papaverism. By C. H. Hughes, M. D., St. Louis. (Reprint.)

Fractures of the Neck of the Femur, with Special Reference to Bony Union after Intra-Capsular Fracture. By N. Senn, M. D., of Milwaukee, Wisconsin. Extracted from the Transactions of the American Surgical Association, Vol. I. 1883. Philadelphia: Collins, Printer, 705 Jayne Street.

Researches on the Pulse-Wave. An Experimental Inquiry into the Causes of Pulse-Wave Velocity and Duration of the Cardio-Aortic or Presphygmic Interval observed in Man, etc. By A. T. Keyt, M. D., Cincinnati, Ohio. (Reprint from The Journal of the American Medical Association.) Chicago. 1883.

Opera Minora. A Collection of Essays, Articles, Lectures, and Addresses from 1866 to 1882, inclusive. By Edward C. Seguin, M. D. New York: G. P. Putnam's Sons. 1884.

Thirty-Sixth Annual Report of the Trustees of the Massachusetts School for the Feeble-Minded, at South Boston, for the Year ending September 30, 1883. Boston. Public Document No. 28. 1884.

Is the Extirpation of the Cancerous Uterus a Justifiable Operation? By A. Reeves Jackson, A. M., M. D. (Reprint from Vol. VIII. Gynecological Transactions. 1883.)

Diseases of the Bladder, Prostate Gland, and Urethra, including a Practical View of Urinary Diseases, Deposits, and Calculi. Illustrated by numerous Wood Engravings. Fifth Edition, revised and much enlarged throughout. By Frederick James Gant, F. R. C. S., Senior Surgeon to the Royal Free Hospital. New York: Bermingham & Co. 1884.

Excessive Venery, Masturbation, and Continence. The Ætiology, Pathology, and Treatment of the Diseases resulting from Venereal Excesses, Masturbation, and Continence. By Joseph W. Howe, M. D. New York: Bermingham & Co. 1884.

Handbook of Eclampsia, or Notes and Cases of Puerperal Convulsions, etc. By E. Michener, M. D., J. H. Stubbs, M. D., B. Thompson, M. D., R. B. Ewing, M. D., S. Stebbins, M. D. Philadelphia: F. A. Davis, Attorney, 1883.

A System of Oral Surgery. Being a Treatise on the Diseases and Surgery of the Mouth, Jaws, Face, and Teeth, and Associate Parts. By James E. Garretson, M. D., D. D. S., etc. Illustrated with Numerous Steel Plates and Wood Cuts. Fourth Edition, thoroughly revised with additions. Philadelphia: J. B. Lippincott & Co. 1884.

The Reciprocal Attitude of the Medical Profession and the Community. Alexander Hutchins, A. M., M. D., Brooklyn, N. Y. Anniversary Address before the Medical Society of the State of New York, by the President, February 6, 1884.

Female Hygiene and Female Diseases. By J. K. Shirk, M. D. Lancaster, Penn. 1884.

Original Articles.

THE TREATMENT OF RETROVERSION OF THE UTERUS WITH ADHESIONS.[1]

BY J. W. ELLIOT, M. D.,
Assistant Surgeon Free Hospital for Women.

This malady has been and is still considered by many incurable. Thomas,[2] referring to adhesions, says "this is one of the conditions which render the prognosis" of retroversion "unfavorable." All the other text-books of the day are equally discouraging, and none of them lay down a definite mode of treatment. In my own experience I have found these cases curable. I therefore venture to describe a method by which favorable results may be obtained. This method consists, in brief, in repeatedly packing the posterior vaginal cul-de-sac with tampons in such a manner that the adhesions being gradually stretched, broken, and absorbed, the uterus is pushed into its normal position.

This method is by no means new. Dr. Bozeman claims to have used it before 1860. Dr. Taliaferro[3] first described it in a paper read before the Medical Association of Georgia, in 1878, on The Application of Pressure in Diseases of the Uterus. I understand also that this method has been used by a few New York specialists and several of my colleagues in Boston. I first learned it from Dr. Baker, who has practiced it for several years with most satisfactory results, and to him I owe many of my opportunities for investigating its value. This general method has, then, been employed by a few physicians with variable results. The details of the procedure have differed in more or less essential points with all. Without discussing these differences I shall simply describe the particular method which I now use after three years' experience. First let us consider what the course of this disease is when not treated.

When the uterus becomes retroverted from any cause it is lower in the pelvis, and drags more or less on the twisted broad ligaments, which contain the large arteries and veins which supply that organ. This causes a passive congestion in the uterus. This means increased size and weight. The increased size and weight cause in turn increased dragging; thus we have a "pernicious circle" established. The ultimate result of long-continued passive congestion is an increase of interstitial tissue. Here, then, we have a condition which tends to grow worse. This may give rise to quite a disagreeable set of symptoms, namely, feelings of dragging, of pressing down of the abdominal contents, and a sense of weight. The increased vascularity gives rise to increased menstrual flow, to increased secretion from the glands and mucous membrane (fluor albus), and to increased sensitiveness of uterus and vagina. The bladder being more or less displaced there is often frequent and difficult micturition. The rectum may be obstructed by the fundus uteri so as to cause difficult or painful defecation. The peritoneal surface of a uterus in this condition often becomes inflamed. If this occurs the result may be that the uterus becomes more or less firmly fixed by peritoneal adhesions; in which case the above-mentioned symptoms are, of course, increased. Not only this but when the uterus is once fixed in retroversion by adhesions successive attacks of local peritonitis usually follow. These attacks may recur after any slight provocation, such as jarring, going about during menstruation, taking cold, etc., until the patient is exhausted by pain or general peritonitis is imminent. She is then obliged to go to bed, where she will often improve for a time, but when she gets up the local peritonitis usually begins again, and she finds herself no better than before. This sort of thing may go on for years or the patient sometimes gives up trying to go about, and becomes a confirmed bed-ridden invalid. This disease is associated with great pain and tenderness in the vagina and all about the pelvis, causing inability to walk and a decline in the general health. The nervous system suffers as a matter of course. It very often causes sterility, and should the uterus by chance become impregnated a miscarriage is almost certain to follow, the common result of which is another sharp attack of local peritonitis with more adhesions. If, however, a miscarriage does not occur and the patient goes to full term, the adhesions are gradually absorbed as the uterus increases in size.

From this we see that retroversion with adhesions is a progressive disease; that it tends to grow worse when there is no treatment.

Next let us inquire into the more exact nature of these adhesions.

The peritonæum of the female pelvis may become inflamed at any point where it covers the various pelvic organs, so one speaks of perisalpingitis, pericystitis, periproctitis, perimetritis, etc. Usually inflammation of several of these organs is present at once. Then one speaks of pelvic peritonitis in distinction on the one side from general peritonitis, on the other from parametritis or pelvic cellulitis, by which last name we mean inflammation of the cellular tissue (including vessels and veins) just under the peritonæum. Inflammation of the peritonæum is associated with the exudation of fluid and the formation of fibrous adhesions. When pus is exuded it is often shut off by membranes between the uterus and rectum, then either the pus fatty degenerates, and is absorbed, or the abscess breaks. When the abscess is emptied healing takes place by the union of its two walls, which are the uterus and the rectum. In this way the uterus may become retroverted and bound firmly to the rectum by a very dense mass of adhesions. Vide Fig. 1.



Fig. 1. (Winckel.) *D*, Douglas's Fossa obliterated by a mass of adhesions, the result of an abscess. *B*, Bladder. *V*, Vagina. *U*, Uterus. *R*, Rectum.

The membranes resulting from peritonitis may become like ligaments, and bind the uterus to the rectum. Vide Fig. 2. When two inflamed surfaces of peritonæum on different organs come in contact they are often glued together. In this way the least firm adhesions are formed. Adhesions vary greatly in size and toughness. The large, tough ones are the result

[1] Being the subject-matter of a lecture delivered at a Summer Course in Boston and cases reported at the Boston Society for Medical Observation, February 4th.
[2] Diseases of Women, page 438.
[3] Atlanta Medical Register, January, 1883.

of often repeated attacks of peritonitis. If no fresh attack occurs the adhesions tend to disappear very slowly. From being constantly stretched and worn by the respiratory and other movements they may finally be absorbed. In spite of this fact many adhesions persist for a lifetime, hence their importance to gynæcologists.

Parametritis usually occurs in the broad ligaments and is, therefore, most often the cause of lateral displacements and adhesions. These lateral adhesions,

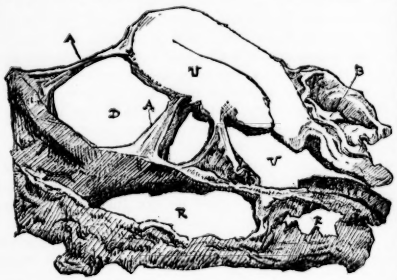


FIG. 2. (Winckel.) *A A*, Adhesions on the stretch. *D*, Douglas's Fossa.

being formed by cicatricial contractions of interstitial tissue, are much firmer and tougher than those resulting from simple peritonitis, which occur in connection with retro and anteversions. These two processes (peritonitis and parametritis) may occur together, and cause a right or left retro-lateral version.

The causes of this disease are various. Merely the condition of retroversion may be the cause of a local peritonitis, and hence adhesions. Also, having a retroversion a local peritonitis from any cause may result in adhesions. Any local peritonitis may form such adhesions about a uterus in normal position as to cause retroversion. The causes of local peritonitis are, then, the causes of adhesions. Among such causes Heitzmann [1] considers irregularity and other anomalies in menstruation as common. Hence any change in uterus, tubes, or ovaries which causes such irregularities, as stenosis, congenital anteflexion, etc., also taking cold during menstruation. Any catarrhal inflammation of the uterus may extend through the tubes to the peritoneal cavity. This most frequently happens with gonorrhœal endometritis. Ovaritis itself may be a cause, also the rupture of a Graafian follicle. The rubbing of a prolapsed ovary may be a cause. Parametritis may cause peritonitis by direct extension. There are various traumatic causes, such as direct injury to peritonæum, falls, coition, vaginal douche, pessaries, and any intra-uterine instrumentation, passing a sound or dilating with tents. Septic absorption from wounds of uterus or vagina may cause septic peritonitis. The last and most common cause is parturition and abortion.

The diagnosis of retroversion with adhesions is arrived at by first establishing the presence of a retroversion (by touch or probe), the adhesions may then be felt through the posterior vaginal cul-de-sac. Vide Fig. 4. In certain cases their presence can only be determined by a failure to replace the uterus by the various well-known maneuvers. A strong firm adhesion is evident, and cannot easily be overlooked. The difficulty is that one not skilled in reducing retroversion may sometimes be led to suppose that the uterus is adherent when it is merely pressed down and caught behind the promontory of the sacrum. This mistake will, however, soon become evident if the treatment here described be applied.

There are four methods of treating this disease: —

(1.) Forcibly tearing up adhesions under ether at one sitting.

(2.) Gradually stretching and tearing the adhesions by lifting the body of the uterus with the finger a little at each sitting.

(3.) Gradually lifting the body of the uterus by a series of pessaries, beginning with a very small one; larger ones are placed as the uterus is lifted higher.

(4.) Packing as here described.

I prefer the last of these methods for most cases, because it seems to me the surest and safest.

To pack the vagina the patient must be placed in the semi-prone or knee-chest position. I use the latter position in the more difficult cases, and the former in ordinary cases, as it is much easier for the patients. A Sims' speculum being passed, small bits of cotton, wrung out in glycerine, are then packed into the posterior vaginal cul-de-sac. Each bit is placed with dressing forceps held in the right hand. It is then pressed back as hard as occasion may require with the blade of the speculum held in the left hand. Vide Fig. 3. When the posterior cul de-sac is full, the vagina

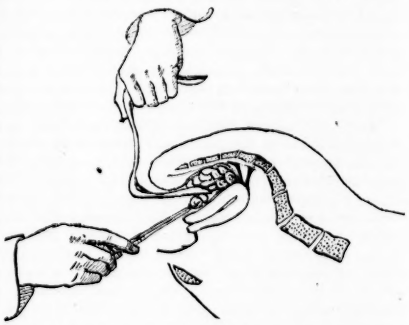


FIG. 3. Manner of placing the Cotton Tampons.

is then packed full of the same tampons to hold those placed in the cul-de-sac tight up against the fundus of the uterus. At the outlet of the vagina the cotton is pressed back toward the rectum, away from the point where the urethra passes under the pubic arch, as pressure on that point may cause retention. The last two pieces of cotton should be rather larger than the others, and one should be pushed to the right and the other to the left, so that when the patient stands and pressure comes from above these two pieces wedge each other like the stones in an arch and keep the packing from falling out. The packing being thus placed piece by piece, the result should be that, as a whole, the mass will exactly conform to the shape of the vagina, exerting a firm, even, and constant pressure against the fundus uteri. It will of course require some practice to do this well. The packing should be removed every three to five days, with the patient in the same posi-

[1] Beckenbauchfells Entzündung.

tion. On removing the packing we find the post-vaginal cul-de-sac somewhat deeper, for the pressure when properly applied tends always to wedge the uterus away from the rectum. Before replacing the packing it is a good plan to try to determine how much has been gained and where the adhesions still bind. This is best done while the patient is in the semi-prone position by hooking the cervix forward with a tenaculum held in the left hand, then passing the forefinger or two fingers of the right hand high up into the posterior vaginal cul-de-sac (the palm being toward the patient's back), and pressing the uterus forward with the back of the finger. In this way the adhesions can be put on the stretch over the ends of the fingers, and a good

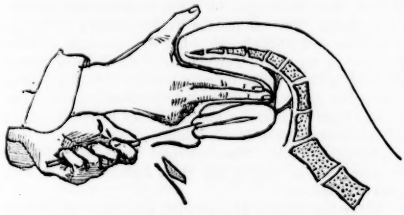


Fig. 4. Method of detecting the Adhesions.

estimate of their strength and position be formed. Vide Fig. 4.

We then proceed to repack the vagina as before. The pressure should be exerted directly backwards into the posterior cul-de-sac against the remaining adhesions. If the force is directed too far forward the result is that the cervix and bladder are raised and tipped forward, while the fundus remains fixed and unmoved. The ability to get the pressure exactly in the right direction is a matter of skill, and requires practice. The question of how tight the packing is to be must remain a matter of judgment in each case at each packing. This judgment will depend upon the condition of the vaginal wall and upon the increasing or diminishing tenderness of the adhesions. In a general way it is best to begin with a light packing, and increase the pressure each time until you pack as hard as you can, unless some contra-indication becomes manifest. The possible dangers from too tight packing are peritonitis and sloughing or rupture of the vagina. As a matter of experience most men pack too loose rather than too tight. Even when there is considerable tenderness a well fitting tight packing gives the most relief.

Some patients get immediate relief when the first packing is applied, and are perfectly comfortable during the whole treatment. Others have constant pain and discomfort. If the treatment is painful the patient must be very carefully managed. A nervous woman, who has often had attacks of pelvic peritonitis, will complain loudly, and actually say that she is sure you have started the inflammation again. It is sometimes very difficult to distinguish between hyperæsthesia and real tenderness. In such cases, when you have decided that there is no increasing local peritonitis, it is important to persist with the packing in spite of their protestations. One soon learns the peculiarities of each individual. It is, of course, very important to stop packing at the slightest indication of increasing or fresh local peritonitis. I have known of several severe cases of peritonitis followed by abscess, etc., which was caused by packing. I have never had this misfortune myself, and it seems to me entirely unnecessary. It may, however, become a very delicate and difficult problem in the case of a feeble and nervous patient to begin with a light packing, making sure that you are doing no harm, and at the same time holding your patient under strict and strong control, to push the treatment forward, packing tighter and tighter, until the uterus is forced into its normal position. No routine can be laid down for such cases.

The packing must be removed before each menstruation.

The treatment is to be continued until the fundus uteri can be pushed well forward; the uterus can then easily be held in position by a pessary. If, however, the adhesions are very resisting and the patient becomes somewhat run down by the treatment, a convenient time to rest is when the fundus has been raised just above the promontory of the sacrum. At this point the uterus can be held for a time with a Thomas' bulb pessary or with a soft rubber bulb pessary. The pressure of the packing may cause constipation; if so, the bowels must be regulated by a cathartic.

As before stated, the packing acts by mechanically forcing the posterior vaginal cul-de-sac up into Douglas's fossa, and thus separating uterus from rectum. Some of the adhesions are torn off, others are so stretched and pulled that being deprived of blood supply they finally wither and are absorbed

The packing is applied as above stated in the knee-elbow or semi-prone position, when the contents of the pelvis are hanging forward into the abdomen and the vagina is at its greatest length. Consequently, when the upright position is resumed, we have a mass of cotton wedging its way up behind the fundus uteri and the weight of all the organs tending to pull the cervix downwards. These two forces twist the retroverted uterus into its normal position.

The uterus, as above stated, having become passively congested, is large and tender. The packing exerts an even pressure against the organ, which partially empties it of blood, so that when the packing is removed the cervix appears smaller and wrinkled. The packing acts in this respect like a well-applied bandage on a swollen limb, and often gives in this way the greatest relief. As the uterus becomes less congested and is raised higher in the pelvis, the attacks of perimetritis (before referred to) become less frequent and less severe, and finally do not recur. The carefully-applied pressure seems also to exert a favorable influence on the inflamed peritoneal surface. I have of late become so impressed with this fact that I now often begin packing when there is considerable tenderness, and I find that this treatment is frequently much the quickest cure for chronic local peritonitis.

I have used various materials for these tampons, but I prefer cotton pluggets wrung out in glycerine. In packing I dip every fourth or fifth plugget in iodoform to keep the packing sweet. Where the adhesions are very firm I sometimes use bits of compressed sponge wrapped in cotton cloth. The sponge swells and exerts a very powerful pressure. I prefer to have the patients walk about during the treatment, for I think in this way the adhesions work loose faster. But certain debilitated cases I have kept in bed.

The general health is usually somewhat pulled down during the treatment; on the other hand it is often im-

proved by the immediate comfort caused by relief from dragging, etc.

It is hoped that this manner of packing will not be confounded with the ordinary cotton pessary for simple retroversion, or with the practice which is not uncommon among physicians of loosely placing a few tampons in the vagina. This sort of thing is, of course, entirely inadequate. The method here described is intended for the treatment of an important disease, and when really firm adhesions are present the packing must be delicately and understandingly applied, each bit of cotton being placed with precision, otherwise it is worse than useless.

The cases here reported were treated at the Free Hospital for Women, the Boston Dispensary, and in my own private practice.

I am greatly indebted to Drs. Davenport and Green, of the Dispensary, for their kind permission to use the records of the cases as they passed to and from my treatment when the terms of service changed.

Out of 1500 gynæcological patients who have come under my observation and treatment within the last three years, there have been eighty-nine cases of retroversion with adhesions, is about .06. Of these cases, two, occurring in old women without symptoms, were advised against treatment, four are still under treatment, and seem to me to be curable, sixteen disappeared without treatment and sixty-seven were cured. By cured I mean here that the adhesions were so dissipated that the uterus is held in its normal position with a pessary, and that the patients have been free from the recurring attacks of pelvic peritonitis. Two of these cases have relapsed after removing the pessary against my directions. In two cases I have already removed the pessary, and the uterus remains in good position. Two cases have become pregnant after several years of sterility.

The length of time required for the treatment of these cases has varied from one month to three years.

The most troublesome complication has been prolapse of the ovaries. In twelve cases there was prolapse of one or both ovaries. With this complication it is necessary to proceed much more slowly. Prolapsed ovaries are almost always very sensitive, and the packing must be placed with great care until they are pushed to one side. Lacerated cervix was a common complication. This condition was invariably much improved by the pressure of the packing. Lacerated perinæum was occasionally an annoying complication on account of the difficulty in keeping the cotton in place. In no case, however, was it found necessary to sew up the perinæum before overcoming the adhesions. In one or two debilitated patients with ruptured perinæums the vagina, after being stretched by the packing, was left in a very flabby condition. This subinvolution of the vagina gradually disappears in a few months.

The change of life came about in one case, aged thirty-five, during treatment.

In one case at the Free Hospital the whole pelvis was filled with a mass of false membranes. The uterus was so imbedded in this mass that there seemed to be adhesions on every side. For three years this case was treated for several months in each year. The uterus is now movable and held in good position with a pessary, and the patient does all her own housework.

The patients have all been more or less relieved of their symptoms. Some have been restored to good health. Some were left in a very nervous condition. The few who had been bed-ridden were put on to their feet again and seemed delighted.

By way of illustration I will give the records of one case: —

CASE I. On November 3d Mrs. B. was referred to me by Dr. James Minot. She was large and stout, but in very poor general health, being much run down, was forty-three years old, had been married twenty-four years, had had three children, and eleven or twelve miscarriages. She complained of wind and pain in the abdomen, of fullness and distress after eating, of vomiting, also of a soreness in the left lower abdomen, which at times became so severe that she was obliged to go to bed, and of dragging about pelvis and abdomen, of a bearing-down pain, frequent and painful micturition. The catamenia were natural; there was a profuse white discharge. On examination I found the uterus enlarged, retroverted, and tightly bound down by a large mass of very tender adhesions, subacute pelvic peritonitis, and chronic endometritis. The uterine cavity was three and a quarter inches deep. I advised rest and the hot douche.

November 10th. She returned in about the same condition. The vagina was then lightly packed with cotton tampons.

November 14th. The packing was removed and not replaced on account of approaching catamenia. The patient was ordered to rest in bed during menstruation.

November 21st. The vagina was repacked.

November 26th. The patient is much relieved of her pain and tenderness. The uterus was found somewhat higher in the pelvis and the adhesions less tender. Vagina repacked.

December 1st. The patient has wet her feet and caught cold, complains of pain and tenderness across her abdomen, but is not as sore as she usually is after taking cold. The adhesions were slightly tenderer, vagina hot and dry. Vagina repacked moderately tight.

December 5th. Much less tenderness. Uterus quite movable. Vagina repacked tightly.

December 8th. Uterus quite freely movable. Can be pushed into normal position. A block tin pessary was placed.

December 20th. Pessary holds uterus in good position. Patient is much relieved in every way.

CLINICAL ASPECTS OF CEREBRAL SYPHILIS.[1]

BY HORATIO C. WOOD, M. D.,

Professor of Diseases of the Nervous System in the University of Pennsylvania.

IN the present article I propose to say very little in regard to the lesions of cerebral syphilis, only making such allusions as are necessary to the clinical study. So much practical importance attaches to the ætiological relations of the disorder that I shall discuss these at some length.

We do not know why syphilis attacks one portion of the brain rather than another in any individual case; indeed, very rarely can we give any sufficient explanation why the brain is affected at all.

It is naturally to be expected that any cause of

[1] Read before the College of Physicians of Philadelphia, February 6, 1884.

ordinary brain inflammation would, when present in a syphilitic person, tend to precipitate a specific cerebral disease. Thus, as thermic fever frequently provokes chronic meningitis, much plausibility attaches to the report of a case in the *Journ. de Méd. et Chir. prat.*, Paris, 1879, page 291, where the cerebral syphilis is ascribed to a sunstroke. Blows and other traumatisms would, in a similar manner, be supposed to figure largely as exciting causes of brain syphilis; but I have never met with a case having such relations, and reports of them are rare in literature. The only records I have found are the cases reported by Dr. Broadbent, *London Lancet*, 1876, ii., p. 741, and a small collection in Huebner's article on Nervous Syphilis, in Ziemssen's Encyclopædia, xii., 301. I have seen two cases of presumably traumatic spinal syphilis: one in which a polio-myelitis [1] followed a fall on the ice, and one in which, after a fall from a cart, and marked spinal concussion, a local myelitis developed.[2]

Various authorities attach much influence to overstudy and other forms of cerebral strain in exciting brain syphilis. Engelstedt is stated to have reported cases having such ætiological relations, and Fournier [3] affirms that he has especially seen the disease in professional men and other persons habitually exercising their brains to excess. Neither in private or public practice have I met with any instance where over-brain work could be considered a distinct ætiological factor, whilst the wards of the Philadelphia Hospital and the roll of the University Dispensary are full of cases occurring in persons who use not at all the modicum of brains nature has endowed them with. So far as my observation goes, cases of brain syphilis in which any exciting cause can be found are very rare.

The inherited diathesis is less prone to manifest itself in the nervous system than in other portions of the body, but it certainly is capable of causing every type of nervous disease that follows infection from impure coition.

As early as 1779 Dr. Jos. Glenck [4] reported a case of a girl, six years old, cured by a mercurial course of an epilepsy of three years' standing, and of other manifestations of hereditary syphilis. Graefe found gummatous tumors in the cerebrum of a child nearly two years old.[5] Prof. O. Huebner [6] details the occurrence of pachymeningitis hæmorrhagica in a syphilitic infant under a year old. Dr. Hans Chiari [7] reports a case in which very pronounced syphilitic degeneration of the brain-vessels was found in a child fourteen months old. Both Dr. Barlow [8] and Dr. T. S. Dowse [9] report cases of nerve syphilis in male infants of fifteen months.

It is a matter of great interest to know how late in life nervous disease from inherited taint may develop. We have, as yet, little light upon the equally interesting and cognate problem as to how far inherited syphilis may produce late in life nervous diseases whose type is not distinctly specific, but it is probable that even after puberty specific nervous affections may appear for the first time in the unfortunate offspring of syphilitic parents. Mr. Nettleship reports [10] the development of a cerebral gumma in a girl of ten years, and Mr. J. A. Ormerod [11] of a tumor of the median nerve (probably gummatous) in a woman of twenty-three, both the subjects of inherited syphilis. Dr. Thomas S. Dowse [12] details a case of cerebral gumma at the age of ten years, and Dr. Samuel Wilks [13] one of epilepsy from inherited taint in a boy of fourteen. Dr. I. Hughlings Jackson reports [14] paraplegia with epilepsy in a boy of eight, hemiplegia in a girl of eighteen, and in the *British Medical Journal*, May 18, 1872, hemiplegia in a woman of twenty-two; the nervous affection in each case being associated with or dependent upon inherited syphilis. Dr. E. Mendel reports [15] a case of a child who had inherited syphilis, and developed in her fifteenth year a maniacal attack with hallucinations.

Some time since I saw, in an orphan of fourteen, a chronic basal meningitis, and, in the absence of any history, gave the fatal prognosis of tubercular disease, but to my astonishment, under the long-continued use of iodide of potassium, complete recovery occurred. No signs of inherited syphilis were perceptible, but the specific nature of the inflammation is, in view of the result, scarcely doubtful; it is probable that in some of the reported cases of alleged recovery from tubercular meningitis the affection has really been syphilitic.

The relation of inherited syphilis to idiocy appears to be a close one. What rôle the diathesis has in the production of those cases which are dependent upon arrest of development we have no way at present of knowing, but that it very frequently causes chronic hydrocephalus seems to be well established. A number of cases have been reported; they have been collected by Dr. E. Mendel.[16]

Nervous diseases following acquired syphilitic infection certainly belong to the advanced stages of the disorder. Huebner reports [17] a case in which thirty years elapsed between the contraction of the chancre and the nervous explosion. I have seen a similar period of thirty years. Fournier reports intervals of twenty-five years, and thinks from the third to the tenth year is the period of maximum frequency of nerve accidents.

The fact that cerebral syphilis may occur many years after the cessation of all evidence of the diathesis is one of great practical importance, especially when taken in conjunction with the circumstance that the nervous system is more prone to be attacked when the secondaries have been very light than when the earlier manifestations have been severe. I have repeatedly seen nerve syphilis in persons whose secondaries have been so slight as to have been entirely overlooked or forgotten, and who honestly asserted that they never had had syphilis, although they acknowledged to gonorrhœa or to repeated exposure, and confessed that their asserted exemption was due to good fortune rather than chastity.

To show that my experience is not peculiar, I may

[1] In this case the man had symmetrical specific skin eruptions upon the arm, and the symptoms were peculiarly symmetrical; great coldness of both fore-arms; excessive sweating of the palms; loss of power, so much more pronounced in the extensors than elsewhere that the patient had been treated for lead-poisoning and great wasting of the extensor muscles. Evidently a symmetrical syphilis chiefly confined to the anterior spinal cornua.

[2] Univers. Hosp. Dispen. Service Book, x., 1875, p. 58.

[3] La Syphilis du Cerveau.

[4] Doctrina de Morbis Venereis, Vienna.

[5] Arch. f. Ophthalm., Bd. i., erst. Abth.

[6] Virchow's Archiv, Bd. lxxxiv., 269.

[7] Wien. Med. Wochenschrift, xxxi., 1881, 17.

[8] Lond. Patholog. Soc. Trans., 1877.

[9] The Brain and its Diseases, vol. i., p. 76.

[10] Trans. Lond. Path. Soc., xxxii., 13.

[11] Ibid., p. 14.

[12] Loc. cit, p. 71.

[13] Lectures on Dis. of Nerv. Syst., Philadelphia, 1878, p. 333.

[14] Journ. Ment and Nerv. Diseases, 1875, p. 516.

[15] Archiv f. Psychiatrie, Bd i., 313.

[16] Archiv f Psychiatrie, Bd. i., 309. For a very important paper see, also, Virchow's Archiv, Bd. xxxviii., p. 129.

[17] Ziemssen's Encyclopædia, xii., 298, New York edition.

be allowed to make the following citations: Dr. Dowse [1] says: "Often have I had patients totally ignorant of having at any time acquired or experienced the signs or symptom of syphilis in its primary and secondary stages, yet the sequelæ have been made manifest in many ways, particularly in many of the obscure diseases of the nervous system." Dr. Buzzard [2] reports a case of nervous syphilis where the patient was unconscious of the previous existence of a chancre or of any secondaries. Professor Rinecker also calls attention [3] to the frequency of nervous syphilis in persons who afford no distinct history of secondary symptoms.

This frequent absence of history of specific infection is of great practical importance, and has led me to attach comparatively little weight to the statements of patients. In private practice I usually avoid asking questions which might bring up from the past unpleasant memories, and arrive at the diagnosis by studying the symptoms present.

Although syphilis is most prone to attack the nervous system many years after infection, it would be a fatal mistake to suppose that brain disease may not rapidly follow the occurrence of a chancre. What is the minimum possible intermediate period we do not know, but it is certainly very brief, as is shown by the following cases of this so-called precocious cerebral syphilis. Dr. Alfrik Ljunggrén, of Stockholm, reports [4] the case of H. R., who had a rapidly-healed chancre in March, followed in May of the same year by a severe headache, mental confusion, and giddiness. Early in July H. R. had an epileptic attack, but he was finally cured by active antisyphilitic treatment. Although the history is not explicit the nervous symptoms appear to have preceded the development of distinct secondaries other than rheumatic pains.

Davaine is said [5] to have seen paralysis of the portio dura "a month after the first symptoms of constitutional syphilis." Dr. E. Leyden [6] found advanced specific degeneration of the cerebral arteries in a man who had contracted syphilis one year previously. Dr. R. W. Taylor details a case in which epilepsy occurred five months after the infection.[7] In the case of M. X., reported by Dr. Ad. Schwarz,[8] headache came on the fortieth day after the appearance of the primary sore, and a hemiplegia upon the forty-sixth day. S. L.[9] had a paralytic stroke, without prodromes, six months after the chancre. A. P. L.[10] had an apoplectic attack seven months after the chancre; A. S. one five months after her chancre. In a case which recently occurred in the practice of Dr. A. Sydney Roberts, of this city, the chancre appeared after a period of incubation of twenty-six days, and two months and eight days subsequent to this came the first fit; eight days after the first the second convulsion occurred, with a distinct aura, which preceded by some minutes the unconsciousness. The further details of this case are not germane to the present discussion, which only requires the additional statement that the attack developed into an unmistakable cerebral syphilis, with temporary aphasia, and that convalescence was finally secured by active antisyphilitic treatment. As the first paroxysm came on without warning, whilst the man was fishing in the sun, it is not unwarrantable to suppose that a precocious cerebral syphilis was in this case precipitated by exposure to the ordinary causes of sunstroke. This list of cases might be much extended, but it certainly is sufficient to show that cerebral syphilis occurs not very rarely within six months after infection, and may be present in two months.

An interesting observation in this connection is that of Dr. Ern. Gaucher [11] of a spinal syphilis occurring six months after the appearance of a chancre.

Syphilographers are in accord in regard to the existence of two pathological varieties of brain syphilis, whilst some authorities believe in a third form. The most common seat of attack is the membranes; next to these are the brain vessels, whilst, as already intimated, there is difference of opinion as to whether the disease ever directly affects the brain tissue. Reasons will be given later on for believing that the brain substance may suffer violence from syphilis, but I shall first discuss the clinical aspects of specific disease of the membranes.

DISEASE OF BRAIN MEMBRANES.

Specific affections of the brain membranes very often declare themselves with great suddenness. The records of the disease present case after case in which an apoplectic attack, a convulsive paroxysm, a violent mania, or a paralytic stroke, has been the first detected evidence of syphilitic cerebral disease. On the other hand, in many instances the symptoms come on slowly and successively. Proper treatment, instituted at an early stage, is usually successful, so that a careful study of these prodromes is most important. They are generally such as denote cerebral disturbance, and, although they should excite suspicion, are not diagnostic except as occurring in connection with a specific history or under suspicious circumstances.

Headache, slight failure of memory, unwonted slowness of speech, general lassitude, and especially lack of willingness to mental exertion, sleeplessness or excessive somnolence, attacks of momentary giddiness, vertiginous feelings when straining at stool, yelling, or in any way disturbing the cerebral circulation, alteration of disposition, any of these, and *a fortiori*, several of them, occurring in a syphilitic subject, should be the immediate signal of alarm, and lead to the examination of the optic disks, for in some cases the eyeground will be found altered even during the prodromic stage. Of course if choked disk be found the diagnosis becomes practically fixed, but the absence of choked disk is no proof that the patient is not suffering from cerebral syphilis. In regard to the individual prodromic symptoms, my own experience does not lend especial importance to any one of them, although, perhaps, headache is most common. There is one symptom which may occur during the prodromic stage of cerebral syphilis, but is more frequent at a later stage, a symptom which is not absolutely characteristic of the disease, but which, when it occurs in a person who is not hysterical, should give rise to the strongest suspicion. I refer to the occurrence of repeated, partial, passing palsies. A momentary weakness of one arm, a slight drawing of the face, disappearing in a few hours,

[1] The Brain and its Diseases, London, 1879, vol. i., p. 7.
[2] Syphilitic Nervous Affections, London, 1874, p. 80.
[3] Archiv f. Psychiatrie, vii., p. 241.
[4] Archiv f. Dermatol. und Syphilis, 1870, ii., p. 155.
[5] Buzzard, Syphilitic Nervous Affections, London, 1874.
[6] Zeitschrift f. Klin. Med., Bd. v., 165.
[7] Journ. Nervous and Mental Dis., 1876, p. 38.
[8] De l'Hemiplegia Syphilitique Précoce, Inaug. Diss., Paris, 1880.
[9] Ibid.
[10] Ibid
[11] Revue de Méd., 1882, ii., 678.

a temporary dragging of the toe, a partial aphasia, which appears and disappears, a squint, which to-morrow leaves no trace, may be due to a non-specific brain tumor, to miliary cerebral aneurisms, or to some other non-specific affection, but in the great majority of cases where such phenomena occur repeatedly the patient is suffering from syphilis or hysteria.

The first type or variety of the fully formed syphilitic meningeal disease to which attention is here directed is that of an *acute meningitis*. I am much inclined to doubt whether an acute syphilitic meningitis can ever develop as a primary lesion, whether it must not always be preceded by a chronic meningitis or by the formation of a gummatous tumor, but it is very certain that acute meningitis may develop when there have been no apparent symptoms and may, therefore, seem to be abrupt in its onset. Some years ago I saw, in consultation, a man who, in the midst of apparent health, was attacked by violent meningeal convulsions, with distinct evidences of acute meningitis. He was apparently saved from death by very heroic venesection, but after his return to consciousness developed very rapidly a partial hemiplegia, showing that a latent gumma had probably preceded the acute attack. On the other hand, an acute attack is liable at any time to supervene upon a chronic syphilitic meningitis. At the University Hospital Dispensary I once diagnosticated chronic cerebral syphilis in a patient who, the next day, was seized with violent delirium, with convulsions and typical evidences of acute meningitis, and died four or five days afterwards. At the autopsy an acute meningitis was found to have been engrafted on a chronic specific lesion of a similar character. In the case reported by Dr. Gamel,[1] in which intense headache, fever, and delirium came on abruptly in an old syphilitic subject, and ended in general palsy and death, the symptoms were found to depend upon an acute meningitis, secondary to a large gumma.

In this connection may well be cited the observation of Dr. Molinier,[2] in which violent delirium, convulsions, and coma occurred suddenly. A very curious case is reported by Dr. D. A. Zambaco,[3] in which attacks simulating those of acute meningitis appear to have been produced in a man with a cerebral gummatous tumor by a malarial complication. In such a case the diagnosis of a malarial paroxysm could only be made by the presence of the cold stage, the transient nature of the attack, its going off with a sweat, its periodical recurrence, and the therapeutic effect on it of quinine.

In the cases of *chronic meningeal syphilis* which have come under my observation, most usually after a greater or less continuance of prodromes, such as have been mentioned, epileptic attacks have occurred with a hemiplegia or a monoplegia, which is almost invariably incomplete, and usually progressive; very frequently diplopia is manifested before the epilepsy, and on careful examination is found to be due to weakness of some of the ocular muscles. Not rarely oculomotor palsy is an early and pronounced symptom, and a marked paralytic squint is very common. Along with the development of these symptoms there is almost always distinct failure of the general health, and progressive intellectual deterioration, as shown by loss of memory, failure of the power to fix the attention, mental bewilderment, and, perhaps, aphasia. If the case convalesce under treatment the amelioration is gradual, the patient traveling slowly up the road he has come down. If the case end fatally it is usually by a gradual sinking into complete nerve-paralysis, or the patient is carried off by an acute inflammatory exacerbation, or, as I saw in one case, amelioration may be rapidly occurring, and a very violent epileptic fit produce a sudden asphyxia. In this form of cerebral syphilis death from brain softening around the tumor is not infrequent, but a fatal apoplectic hæmorrhage is rare.

The clinical varieties of cerebral meningeal syphilis are so polymorphic and kaleidoscopic that it is almost impossible to reduce them to order for descriptive purposes. Professor Fournier separates them into the cephalic, congestive, epileptic, aphasic, mental, and paralytic, but scarcely facilitates description by so doing. Huebner makes the following types: —

"(1.) Psychical disturbances, with epilepsy, incomplete paralysis (seldom of the cranial nerves), and a final comatose condition, usually of short duration.

"(2.) Genuine apoplectic attacks with succeeding hemiplegia, in connection with peculiar somnolent conditions, occurring in often-repeated episodes; frequently phenomena of unilateral irritation, and generally at the same time paralyses of the cerebral nerves.

"(3.) Course of the cerebral disease similar to paralytica dementia."

In regard to these types the latter seems to me clear and well defined, but contains those cases which I shall discuss under the head of cortical disease.

Meningeal syphilis as seen in this country does not conform rigidly with the other asserted types, although there is this much of agreement that when the epilepsy is pronounced the basal cranial nerves are not usually paralyzed, the reason of this being that epilepsy is especially produced when the gummatous change is in the ventricles or on the upper cortex. In basal affections the epileptoid spells, if they occur at all, are usually of the form of petit mal, but this rule is general, not absolute. The apoplectic, somnolent form of cerebral syphilis, for some reason, is rare in this city, and it seems necessary to add to those of Professor Huebner's a fourth type, to which a large proportion of our cases conform. This type I would characterize as follows: —

(4.) Psychical disturbance without complete epileptic convulsions associated with palsy of the basal nerves and often with partial hemiplegia.

The most satisfactory way of approaching this subject is, however, to study the important symptoms in severalty, rather than to attempt to group them so as to make typical, recognizable varieties of the disease, and this method I shall here adopt.

Headache is the most constant and usually the earliest symptom of meningeal syphilis; but it may be absent, especially when the lesion is located in the reflexions of the meninges, which dip into the ventricles, or when the basal gumma is small and not surrounded with much inflammation. The length of time it may continue without the development of other distinct symptoms is remarkable. In one case,[4] at the University Dispensary, the patient affirmed that he had had it for four years before other causes of complaint appeared. It sometimes disappears when other manifes-

[1] Tumeurs Gommeuses du Cerveau, Inaug. Diss., Montpellier, 1875.
[2] Revue Méd. de Toulouse, xiv., 1880, 341.
[3] Des Affections Nerveuses Syphilitiques, Paris, 1862, page 485.
[4] Book Y, page 88, 1879.

tations develop. It varies almost indefinitely in its type, but is, except in very rare cases at least, so far paroxysmal as to be subject to pronounced exacerbations. In most instances it is entirely paroxysmal, and a curious circumstance is that very often these paroxysms may occur only at long intervals; such distant paroxysms are usually very severe, and are often accompanied by dizziness, sick stomach, partial unconsciousness, or even by more marked congestive symptoms. The pain may seem to fill the whole cranium, may be located in a cerebral region, or fixed in a very limited spot. Huebner asserts that when this headache can be localized it is generally made distinctly worse by pressure at certain points, but my own experience is hardly in accord with this. Any such soreness plainly cannot directly depend upon the cerebral lesion, but must be a reflex phenomenon, or due to a neuritis. According to my own experience, localized soreness indicates an affection of the bone or of its periosteum. In many cases, especially when the headache is persistent, there are distinct nocturnal exacerbations.

It will be seen that there is nothing absolutely characteristic in the headache of cerebral syphilis; but excessive persistency, apparent causelessness, and a tendency to nocturnal exacerbation, should in any cephalalgia excite suspicion of a specific origin; a suspicion which is always to be increased by the occurrence of slight spells of giddiness, or by delirious mental wandering accompanying the paroxysms of pain. When an acute inflammatory attack supervenes upon a specific meningeal disease, it is usually ushered in by a headache of intolerable severity.

When the headache in any case is habitually very constant and severe, the disease is probably in the dura mater or periosteum, and this probability is much increased if the pain be local and augmented by firm, hard pressure upon the skull over the seat of the pain.

Disorders of Sleep. — There are two antagonistic disorders of sleep, either of which may occur in cerebral syphilis, but which have only been present in a small proportion of the cases that I have seen. Insomnia is more apt to be troublesome in the prodromic than in the later stages, and is only of significance when combined with other more characteristic symptoms. A peculiar somnolence is of much more determinate import. This may occur in non-specific leptomeningitis, and in states of altered brain nutrition from senile or other degenerations of the walls of the cerebral vessels, and is therefore not pathognomonic of cerebral syphilis, yet of all the single phenomena of the latter disease it is the most characteristic. Its absence is of no import in the theory of an individual case.

As I have seen it, it occurs in two forms: In the one variety the patient sits all day long or lies in bed in a state of semi-stupor, indifferent to everything, but capable of being aroused, answering questions slowly, imperfectly, and without complaint, but in an instant dropping off again into his quietude. In the other variety the sufferer may still be able to work, but often falls asleep while at his tasks, and especially towards evening has an irresistible desire to slumber, which leads him to pass, it may be, half of his time in sleep. This state of partial sleep may precede that of the more continuous stupor, or may pass off when an attack of hemiplegia seems to divert the symptoms. The mental phenomena in the more severe cases of somnolency are peculiar. The patient can be aroused, indeed in many instances he exists in a state of torpor rather than of sleep; when stirred up he thinks with extreme slowness, and may appear to have a form of aphasia; yet, at intervals he may be endowed with a peculiar automatic activity, especially at night. Getting out of bed, wandering aimlessly and seemingly without knowledge of where he is, and unable to find his own bed, passing his excretions in a corner of the room, or in other similar place, not because he is unable to control his bladder and bowels, but because he believes that he is in a proper place for such act, — he seems a restless automaton rather than a man.

Apathy and indifference are the characteristics of this state, and yet the patient will sometimes show excessive irritability when aroused, and will at other periods complain bitterly of pain in his head, or will groan as though suffering severely in the midst of his stupor, at a time, too, when he is not able to recognize the seat of the pain. I have seen a man with a vacant apathetic face, almost complete aphasia, persistent heaviness and stupor, arouse himself when the stir in the ward told him that the attending physician was present, and come forward in a dazed, highly pathetic manner, by signs and broken utterance begging for something to relieve his head. Huebner speaks of cases in which the irritability was such that the patient fought vigorously when aroused; this I have not seen.

This somnolent condition may last many weeks. Dr. T. Buzzard [1] details the case of a man who, after a specific hemiplegia, lay silent and somnolent for a month, and yet finally recovered so completely as to win a rowing match on the Thames.

In its excessive development, syphilitic stupor puts on the symptoms of advanced brain softening, to which it is indeed often due. Of the two cases with fatal result of which I have notes, one at the autopsy was found to have symmetrical purulent breaking down of the anterior cerebral lobes; the other, softening of the right frontal and temporal lobes due to the pressure of a gummatous tumor, and ending in a fatal apoplexy.

This close connection with cerebral softening explains the clinical fact that apoplectic hæmorrhage is very apt to end the life in these cases of somnolent syphilis. Dr. Buzzard's case given above and others which might be cited prove, however, that a prolonged deep stupor in persons suffering from cerebral syphilis does not prove the existence of extensive brain softening, and is not incompatible with subsequent complete recovery. As an element of prognosis, it is of serious but not of fatal import.

(*To be concluded.*)

REPORT ON MATERIA MEDICA.

WILLIAM P. BOLLES, M. D.

ABRUS PRECATORIUS, L. (INDIAN LIQUORICE, PATER NOSTER BEANS, JEQUIRITY, BLACK-EYED SUSANS, ETC.)

THIS plant is by no means new to botanists nor its products to commerce. It was named by Linné, and has had a place in the pharmacopœias of India for forty years, the root, however, being the only part

[1] Clinical Lectures on Dis. Nerv. Syst., London, 1882.

used in medicine. It is a papilionaceous plant, doubtfully placed in the tribe *Viciæ* of the order *Leguminosæ*, a small woody twiner with abruptly pinnate, many-pinnuled leaves, and rose-colored flowers in rather close racemes. The pods are smaller than those of the sweet pea, clustered, four to six seeded. The seeds, considerably smaller than the pea seeds, are roundish ovoid, of a brilliant scarlet color, with a black patch around the hilum, covering about one third of the surface; they are hard and beautifully polished. The plant is indigenous in India, but is found in almost all tropical countries, probably introduced.

The root is used to a small extent in India as a poor substitute for liquorice root. The seeds are used as toys or strung into necklaces or rosaries. They are favorite curiosities with our sailors, and as a consequence were often seen in our sea-ports long before they had any commercial value here.

A full botanical description of the plant, with plate, may be seen in Bentley and Trimen's Medicinal Plants, and of the root, "*Radix abri*," in the Pharmacographia.

The root as well as the leaves contains a sweet principle resembling liquorice, and is destitute of any poisonous or deleterious quality. The seeds have not been thoroughly examined, but are non-poisonous, and have even been used in Egypt as food.

The present interest in the plant centres, however, in the application of the seeds, in infusion or decoction, to trachomatous eyes for the purpose of producing a substitutive conjunctivitis. According to Dr. Moura Brazil, the seeds have been employed for many years in the Brazilian provinces of Ceará and Piauhy for chronic granular conjunctivitis. They are usually prepared by soaking them for a few hours in boiling water, or for a few days in cold water, then blanched, and the kernel reduced to a fine powder, which is macerated for twenty-four hours and filtered. This liquid is applied beneath the eyelids three times a day. The proportion of one part of *jequirity* to twenty of water, the skin and radicle being removed, produces a moderate inflammation, but if all the parts of the seed are used the irritation is most intense.

Dr. Silva found what he supposed to be conidia of some fungus in the fresh infusion, and the mycelium and spores of the same in an older specimen. The same organisms were found in and could be developed from the conjunctival products.[1]

It was introduced into European practice by M. de Wecker, who received a sample of seeds from a patient who, after a long and unsuccessful treatment in Paris, returned to Brazil, and was there cured by this local remedy. The directions accompanying the sample were the following: Take thirty-two seeds (about three grammes), macerate them for twenty-four hours in five hundred cubic centimetres of cold water, then add the same quantity of warm water, filter, and the fluid is ready for use. The infusion changes from green to brown, and finally to yellow, without, however, becoming completely putrid.

Professor Sattler (Sadtler?) found that the symptoms did not vary greatly with the strength of the infusions, a one half per cent. solution producing symptoms almost as severe as one ten times as strong, but that a fresh preparation was much more efficient than one forty-eight hours old, and one prepared at the ordinary temperature than one prepared at a considerably higher one (85° F. to 96° F.). The decoction of the pulverized seeds he found to be inoperative.

The symptoms following the use of jequirity are as follows: The application is painless, and for several hours no sensations follow, then a sense of fullness followed by injection of the conjunctiva and lachrymation appear; then a thin film forms upon the conjunctival surfaces, which, however, is superficial, and can be wiped off without hæmorrhage. By the next day the eyelids are swollen and closed, and the conjunctiva is covered with lymph and pus. General disturbance is often present to a considerable degree, and restlessness and pain almost always. Coryza is a not infrequent accompaniment. This condition lasts five or six days, and then gradually disappears. The cornea is not apt to be, but is occasionally attacked. As the traumatic inflammation passes away the chronic trouble is found to be very much improved.[2]

THE DRASTIC AND VESICATING ELEMENTS OF CROTON OIL SEPARABLE.

The partial or variable solubility of croton oil in alcohol is a long observed fact. The Pharmacographia says: "Its solubility in alcohol (.794) appears to depend in great measure upon the age of the oil and the greater or less freshness of the seeds from which it is expressed, oxidized or resinified oil dissolving the most readily."

M. Harold Senier has succeeded in separating completely the vesicating and purgative principles from each other by means of alcohol. He says: "When alcohol (specific gravity 794–800) is mixed in equal volumes with English pressed croton oil perfect and permanent solution takes place, and this is equally true when any less quantity of alcohol is used. When, however, the proportion of alcohol to oil is as seven to six or any larger proportion of alcohol then a part of the croton oil separates, and cannot afterwards be dissolved by any amount of alcohol. The other portion, on the other hand, is soluble in all proportions of alcohol."

The remarkable feature of the observations is that the alcohol-soluble portion appears to contain all the vesicating principle, and the insoluble the cathartic element of the crude oil. Dr. Meek experimented with the non-vesicating, and found that doses of from one tenth to one half of a drop produced the cathartic action of croton oil without any irritation or other disturbance, the smaller dose being a mild, and the larger a powerful, purgative, unaccompanied by any unpleasant symptoms. The vesicating (soluble) oil in the same doses gave no purgation, but occasioned a considerable amount of nausea and irritation. The latter readily produced pustulation when applied to the skin, the other did not. Further study indicated that the real vesicating element was one of the combined fatty acids, but the author has not yet succeeded in isolating it.

The above observations if supported by clinical experience will greatly increase the value of this remedy as a purgative.[3]

ARBUTIN; UVA URSI.

Dr. Lewin[4] claims to have proved that all the value of uva ursi is due to the arbutin contained in it; that

[1] New Remedies.

[2] Therapeutic Gazette.

[3] Pharmaceutical Journal.

[4] Therapeutic Gazette.

the latter can be given as safely and more efficiently than the other; that both are eliminated in part as hydrochinon in the urine; and that the antizymotic and antiseptic qualities of this latter are the secret of their value in vesical catarrh. (Hydrochinon is a whitish powder, allied to resorcin and pyrocatechin; it is also found in the urine in phenol poisoning.)

The writer states that urine of patients taking uva ursi is discolored to a greater or less degree by the hydrochinon, and "that it remained fresh after standing in the open air for two weeks, while that subsequently voided rapidly decomposed." He recommends that the dose of uva ursi be increased to from thirty to eighty grammes in decoction, filtered through animal charcoal to remove the tannic acid; or, still better, the substitution of arbutin in one gramme (?) doses be used instead.

The price of arbutin, fifty cents per gramme, will prevent its being a very popular remedy, although as it is found in a number of Ericaceæ the supply might be increased.

QUASSIIN.

Although known in a crystalline form for many years the processes for extracting it have been either difficult or wasteful, and all the commercial quassiin has been in the condition of extract. MM. Adrian and Moreaux[1] have proposed a new process by which they obtain a larger quantity, 0.8 per cent. of an amorphous "quassiin," a friable product consisting of not quite half pure quassiin (crystallizable and uncrystallizable); by further purification they obtained 0.125 to 0.150 per cent. of pure white crystals. The amorphous quinine left behind in the mother liquor is about as bitter, and, for all that we know, as good as the other.

The drug examined was the Surinam quassia from *Quassia amara*, L., which is used in France more than that which constitutes the quassia of the United States and Great Britain, but the two drugs appear to be identical in their activity.

CONVALLARIA.

Prof. E. Maragliano[2] made the following observations on Convallaria.

He employed it as an aqueous and alcoholic extract, also its derivatives, convallarin and convallamarin, using it in thirteen cases of valvular (especially mitral) insufficiency, all with the symptoms of cardiac weakness.

In nine cases the result was favorable, and in a few superior even to digitalis; in four cases it had no effect, but neither had digitalis. Convallamarin showed itself the most powerful.

By continued use it increased the secretion of urine, and lowered the frequency of pulse and respiration without otherwise altering it.

The experiment of making use of it in increasing the secretion of urine for the reabsorption of pleuritic exudations failed in the nine cases tried.

The doses given were one to two grammes of the extract, in an indifferent vehicle, daily; of convallarin or convallamarin 0.25 grammes to one gramme daily (0.50 grammes was sufficient in most cases) in pills of about 0.05 grammes each.

[1] Rep. de Pharm., copied in Pharmaceutical Journal.
[2] Archiv der Pharmacie.

COLOCYNTHIN.

Herr Gustav Henke,[3] in a communication to the Pharmaceutical Institute of Strasburg, gives a short history of the previous investigations upon the active principle of colocynth, and his own.

The purest form in which he was able to obtain it was as a "brittle, resinous mass (Mercks' is a softish black extract), making a dry yellow powder, permanent in the air. It is neutral, soluble in twenty parts of cold water, freely so in diluted, and sparingly in absolute, alcohol. Insoluble in chloroform, ether, etc.

He was unable to attain to Waltz's success in obtaining it in crystalline form, although he prepared it after Waltz's method, as well as his own, and he considers the glucoside decomposition, commonly believed, to be erroneous.

He obtained scarcely thirty grammes of the active principle from five kilos of colocynth pulp, or about 0.6 per cent.

PRESERVATION OF GREEN HERBS.

Dr. F. I. B. Quinlan read before the British Pharmaceutical Conference two papers[4] upon preserving green pulps by what he calls ensilage; that is, pounding to a pulp, packing hard, sealing in bottles, and burying deep in the ground. The herbs, in a perfectly fresh state, are bruised to a pulp in a mortar, and then placed in glass bottles, being well tamped down, and filled to the very stopper, so as to exclude all the air. They were then sealed with beeswax, and buried three feet below the ground. Belladonna, conium, and other herbs were kept in this way four months, "perfectly sweet and fit for pharmaceutical purposes." Dr. Quinlan had not, however, at the time of his report, tried the products of his "ensilage," and so the most important claim of the experimenter, the therapeutical value of the products, needs yet to be maintained.

THE AMOUNT OF IODINE IN COD-LIVER OIL.

Mr. Edward C. Stanford[5] has just gone over this much-contested ground, and reached the conclusion that the amount of iodine has heretofore been very much overestimated. The mean of six samples in his hands, and carefully examined, was 0.000322.

GELATINE BANDAGE, TRAUMATICINE, ETC.

Dr. Pick[6] has been employing a glue varnish as a protective coating for cases of chronic eczema, psoriasis, etc. It consists simply of a strong solution of gelatine, or fine glue, painted over the affected parts with a brush, and made flexible by a little glycerine rubbed over its surface after it is dry.

For the same purpose Professor Auspitz has proposed a chloroformic, ten per cent., solution of gutta percha. Both these substances are transparent, and permit the surface to be readily seen. If they should crack or peel they can be easily repaired.

GELSEMINE.

Mr. A. W. Gerrard,[7] F. C. S., has succeeded in obtaining this amorphous alkaloid, of which the purest form has hitherto been Sonnenschein's brownish-yellow powder, in imperfect but unmistakably crystalline

[3] Archiv der Pharmacie.
[4] Pharmaceutical Journal.
[5] Ibid.
[6] Ibid.
[7] American Journal of Pharmacy.

form, and several of its salts, also crystalline. It is white, in "granular" crystals, sparingly soluble in boiling water, from which it separates upon cooling, and differs in its color reactions with acids, and its chemical composition, from that of Sonnenschein.

CHINOLIN, KAIRIN, ETC.

These interesting artificial relatives of the cinchona alkaloids have received a considerable amount of attention from chemists and physiologists during the past year or two. The most promising of these is "kairin," so called. It is a grayish-white powder, with a saltish, bitter, aromatic taste, not very unpleasant, reminding one a little of salicylate of soda. In doses of 0.5 gramme to one gramme it distinctly lowers the febrile temperature for two or three hours, and is followed by sweating. The article is at present rather but not excessively costly, and can be easily obtained in the larger cities by those who wish to use it.

PERFECTLY PURE PHENOL.

Another gain in the manufacture of carbolic acid has been made by a firm in Eisenbüttel, who have produced pure, clear, colorless, *dry, and separate crystals* of this universally used substance. They are less deliquescent than the ordinary crystalline masses; the solution is white, and does not change by light. To every test for purity it excels anything heretofore made.

TANRET'S ERGOTININE.

There is an article upon this alkaloid in the *Pharmaceutical Record* for January, 1884, by M. Tanret himself, in which he defends its value and explains its administration. Although he has obtained the alkaloid in crystalline form, it is not perfectly unchangeable, and he only offers it in syrup and solution. Of the former a teaspoonful, representing 0.00025 of the alkaloid, is the average dose of the solution. For hypodermic use five drops represent the same amount.

Reports of Societies.

NEW YORK COUNTY MEDICAL ASSOCIATION.

ÆTIOLOGY OF TYPHOID FEVER.

At a stated meeting, held February 18th, Dr. E. G. Janeway read a paper on the above subject. He said that in rural districts and in institutions typhoid fever seemed not infrequently to spread by contagion, as person after person sickened with the disease; yet in not a few of these instances it could be shown that such contagion was not direct, but indirect. It could not but be admitted that very few cases would stand a rigorous examination and be capable of proving that the disease was spread by direct contact. In order to arrive at a just conclusion in this matter an inquiry had been made at several hospitals receiving typhoid-fever patients, and the result was in the main negative. All claimed that no nurse or patient in the wards contracted the disease; but in one, some years ago, one of the physicians contracted typhoid fever while residing in the hospital, and in another a domestic sickened with the disease. The small number of cases occurring among those resident in hospitals treating typhoid-fever patients would, therefore, point towards failure of disinfection or to defect in the plumbing of the institution where such cases had occurred.

The principal source of typhoid fever in New York City was to be looked for in defective sanitary arrangements, permitting the entrance of the emanations of the sewers either to the air or to the drinking-water of which the patient made use. It was a great mistake, however, to suppose that invariably when sewer emanations gained entrance to a house, and even when the defects were very great, typhoid fever would appear. The writer had seen marked exceptions to such an idea, which, together with the susceptible character of those exposed, only proved that something more was necessary than ground saturated with water and sewage in order that typhoid fever should occur. In cases of typhoid it was not always easy to decide how the poison gained entrance to the system. If we supposed that germs were floating in the air, the question must be raised, Do they occasion the disease by being received through respiration and taken into the lungs, or are they by this act simply drawn into the mouth and throat, and thence swallowed with the saliva, food, and drink, to develop in the alimentary canal? To the writer the latter method seemed the more probable. Any one who had examined much the sanitary defects in cases of typhoid fever would find that vitiation of water was in many cases possible, especially at the present time, when the water supply and water pressure were both defective in New York. The drawing of water on a lower floor caused a partial vacuum, which, if stop-cocks were open, or if tanks supplied by ball-floats, which opened the pipe when the water was lowered, were employed, or if there were defective valves to pipes in water closets with direct supply, caused an aspiration of air into the water pipes of the house. The writer had traced outbreaks of typhoid fever in two institutions to sanitary defects of this nature and operating in this way. Having alluded to other sources of danger in connection with water pipes, he went on to say that a large number of privy vaults were still attached to the tenement houses in New York, and that there was but one form of these places which was devoid of danger, the school sink or trough closet. In such houses in a large city the question of the origin of cases of typhoid fever, with or without the germs from preëxisting cases of the disease, was as impossible of a just decision as in the case of defective sewage. That these privy vaults served to develop the poison of typhoid fever there was sufficient evidence, and the method of action might be in one of three directions: (1) by the use of the place, (2) by the leakage from such place, causing saturation of the soil beneath a house, and (3) by the connection of the living rooms of a house with such places by waste pipes. For several years the Board of Health had refused to allow any new privy vaults to be constructed; but under the law the tenement-house owner had the option of a trough closet or some form of water closet, and the writer had feared that with the defective water supply, and consequent deficient flushing of soil-pipes, an increase of typhoid fever might result from the introduction of water closets in the tenement houses on a large scale.

In the upper portions of the city of New York wells, with all the attendant liability of sewage-pollution, were still in use to a considerable extent, and the writer had been able to trace the outbreak of typhoid fever in an institution to use of such water by the em-

[1] Pharmaceutical Record. Translation from Pharm. Centralhalle.

ployment of the chloride of lithium test. In this connecton Dr. Janeway gave an account of the outbreak of typhoid fever at Princeton College, in regard to which he had made a thorough investigation. The origin of the trouble was traced to a house within which there was a water-closet discharging into a cess-pool with earth sides and bottom, in a shale soil, forty feet distant from a well, the water of which was found, on chemical analysis, to be seriously polluted. Afterwards the disease was ascertained beyond a doubt to have spread not by the drinking water, by the air, or by direct contact, but by means of the emanations from the sewer and cess-pool into which the passages from those sick with the fever had been thrown without disinfection. As regards the question of origin of this outbreak, whether spontaneous or from a previous case, the writer had been unable to come to a positive conclusion. Other avenues by which the disease might be introduced in a house, and of which the writer had seen possible, though not positive, illustrations, were, by means of refrigerators having direct sewer connection and by contaminated milk and food. He had been able to connect one outbreak in the upper districts of New York with affected milk, possibly diluted with water coming from a contaminated well, as in the cases reported from abroad, especially from England.

Dr. Janeway had reached the following conclusions with reference to the ætiology of typhoid fever:—

(1.) That it is in all probability due to a bacillus.

(2.) That this virus is certainly contained in the discharges from the bowels.

(3.) That it gains entrance to the system through the air coming from places into which the discharges of other typhoid-fever patients have been deposited, or through water contaminated by a similar process, or through milk diluted with contaminated water, or perhaps vitiated by contaminated air.

(4.) That there are instances which point to the probability that the germs which produce typhoid fever may develop in a suitable soil, but not have been derived from a preëxisting case of the disease.

(5.) That it is not necessary to invoke the aid of the rise and fall of the ground water to explain the disease; though a low state of the ground water, by favoring an increase of the impurities in a well or water-supply, may favor the spread of the disease, as may also a sudden severe rain after a drought, by washing impurities, including the germ of the disease, into the drinking water.

(6.) That the failure of the disease to spread when prompt and thorough disinfection of the excreta has been performed, as well as of clothing soiled by such discharges, makes it extremely doubtful whether the disease is communicated by the respiration, perspiration, etc.

(7.) The writer has had no opportunity to study outbreaks of fever resembling typhoid, such as have occasionally been met with abroad, due to the eating of diseased meat.

The writer said that accompanying the paper were tables which would give in detail the number of deaths which had been ascribed in New York to each of a number of febrile diseases since 1852. In each of the last four years more deaths were ascribed to the malarial class of diseases than to typhoid fever; and this he thought was due to error in diagnosis, since in Bellevue Hospital 653 cases of malarial fever had been treated during the last three years, with a mortality of only three, or one death for each year. Among the fevers referred to, from 130 to 154 deaths in each year were reported as due to the hybrid, typho-malarial fever, and, as far as New York City was concerned, the writer regretted the employment of this term. It had led to confusion, and had also prevented those proper measures from being employed which would prevent the spread of typhoid fever and lead to an investigation of its causes. He had long insisted that the evidence of post-mortem examinations was opposed to the use of this term here, and he had known cases which clinically seemed, and were asserted to be, typical of this combination, which only presented the ordinary anatomical conditions of typhoid fever. The concluding part of the paper was devoted to a consideration of the relationship of age to the development of typhoid fever, and of the question whether the disease were increasing or not.

DR. A. FLINT, SR., said he had listened to the paper with great interest, and was glad that the subject had been brought before the Association. At the present time preventive medicine was of greater importance than therapeutic, and our ability to protect the public from typhoid fever, which was a purely preventable disease, depended, of course, on our knowledge of its ætiology. There was every reason to suppose that typhoid fever was developed from a special cause, which produced this particular disease, and no other, just as the eruptive fevers were. Whether this were a germ, or something else, had not as yet been definitely determined; but, reasoning from analogy, it was fair to assume that the disease did depend on a special organism. It was desirable to know, then, whether this special cause, whatever its nature might be, was always derived from the body of a patient ill with typhoid fever, or whether it could not originate spontaneously under certain circumstances. Here, again, it was not possible in our present state of knowledge to say positively; but, reasoning still from analogy, we would infer that the germ, as it might be called for convenience' sake, at all events, always did come from the body of a patient. One point of great practical importance was that this germ was capable of preserving its activity for a considerable period — at least two years. It seemed to be well established that it entered the system in two ways: (1) in the drinking water, or other liquid mixed with water, and (2) by the inspiration of contaminated air. In New York the infection was probably almost always conveyed by contaminated air, and the manner in which this was effected could generally be traced to some defect in plumbing or sewerage. This was why the disease ought to be preventable. It seemed to be the fact, however, that typhoid fever was increasing in New York, and one reason for this, in addition to the defective sanitary provisions found in many houses, was probably the present deficient water supply.

In every case of this disease to which a physician was called it behooved him to ask, What is the cause of the trouble? and the cause, he thought, could almost always be ferreted out if a thorough investigation were made. But in case the physician failed in his duty in this respect, he believed that it was the business of the Board of Health to make such an investigation in every single case of typhoid fever reported to them. In this way a great deal might be accomplished towards the prevention of the disease.

In regard to typho-malarial fever, he was a little

at variance with the author of the paper. He thought that this was a good term, as he believed that even in New York it was not uncommon to find the typhoid fever poison in combination with a malarial element. Dr. Janeway looked at the matter from an anatomical stand-point, while he regarded it mainly from a clinical stand-point. Although the name typho-malaria was of recent origin, this special form of disease had been recognized many years ago by Dr. Drake, who, in his great work on the diseases of the Mississippi Valley, had designated it as malario-typhus.

Dr. Hocheimer said that he was glad to inform the last speaker that the Board of Health was now engaged in the work which he had recommended, and that during the past season he himself (Dr. Hocheimer) had been among those whose duty it was to investigate the circumstances connected with every case of typhoid fever reported in the city. One of the special features which he had noted about the disease as it had prevailed of late was that the central portion of the city (between Sixth and Lexington Avenues) was almost entirely exempt from its ravages, while in the districts along the rivers, both east and west, by far the greatest number of cases occurred. When instances were found in the central district they could almost invariably be traced to a source out of town. It was also worthy of note that typhoid fever as now found in New York differed very greatly from the typical description of the text-books. In nine tenths of the cases not half the ordinary symptoms of the disease could be found.

In regard to some of the sanitary aspects of the disease that he had noticed, he went on to say that no case of it had been found in a house provided with the school sink unless the latter was in a filthy condition or out of repair. In houses with privy vaults it was met with where the vaults were not ventilated or where the ventilating pipes had traps. It was also interesting to note that cases of it occurred on the fourth floor of houses where there were houses in the rear, to the roofs of which the ventilating pipes were carried, these roofs being just on a level with the fourth floors of the houses in front. Where the premises were provided with water closets the cases of typhoid fever were generally found on the upper floors, where the water supply was imperfect and irregular. The youngest child that he had seen ill with it was twenty-two months old, and, as a rule, he found that young children were not attacked by it except after a comparatively long exposure to infection. The greatest number of cases occurred in persons between the ages of twelve and forty, while there was a remarkable immunity in those between forty and sixty. Persons over sixty, however, were found exceedingly liable to contact the disease.

In closing the discussion Dr. Janeway made a few remarks in regard to typho-malaria, the use of which term, he said, tended to keep physicians as well as patients from taking proper precautions in regard to the dejecta, which it was such an essential point to thoroughly disinfect in every case of typhoid fever whether there was any malarial complication or not. Therefore on this ground, as well as from anatomical considerations, he was opposed to the designation, and thought that in those cases in which it would seem to apply clinically it was better to speak of the malarial element simply as a complication of the typhoid fever.

SPECIMENS OF SARCOMA, ETC.

Dr. George L. Peabody presented a specimen of spindle-celled sarcoma of the dura mater, which, he said, was of interest as offering a negative contribution to the subject of cerebral localization, since, although its convex surface made a decided depression in the left hemisphere, its situation was out of the motor tract and no paralysis was caused by it. The patient was seventy-two years of age at the time of death, and as far as the history of the case could be ascertained there had been absolutely no symptoms referable to the tumor.

Dr. Gouley mentioned a somewhat similar case which he had reported in the first number of the *New York Medical Journal*, in 1864, and Dr. Flint then presented a rare and interesting specimen of congenital stenosis of the pulmonary artery, which had led to a reversal of the ordinary conditions in the heart, the right ventricle being relatively very large, and the left ventricle extremely small.

Dr. Janeway related a similar case which he had seen some years ago, after which the President, Dr. Detmold, made, by request, some remarks on the

DIAGNOSIS AND TREATMENT OF SYPHILIS.

All were aware, he said, of the difficulty which was sometimes met with in practice in deciding whether certain symptoms noticed were of specific origin or not, especially in instances where the patient denied ever having had syphilis, or was really unaware that such had been the case. It might, therefore, be of interest to know that there was one indication which he considered absolutely pathognomonic of syphilis, although the text-books seemed to attach little or no importance to it. He did not hesitate to say, however, that he had never in a single instance been misled by it. After referring to the predilection of different diseases for special tissues and organs, and instancing scrofula particularly, as prone to attack the cancellated structure of the bones, he went on to say that syphilis had a decided preference for the bodies of the bones, and especially those bones which were not covered by large masses of muscular or fibrous tissue. Among these might be mentioned the anterior aspect of the tibia, the surface of the ulna, the sternum, the bones of the nose, and the bones of the skull; but of all these the favorite seat of secondary syphilis in the bones was the anterior surface of the tibia. A chronic periostitis was set up, and, as an invariable result of this, there was œdema over the bone. The peculiar feature of this œdema was that it was permanent, so permanent that it continued throughout the rest of the patient's life. Hence this constituted an ineffaceable and certain sign of syphilis, and it was this to which he referred as a pathognomonic symptom. It was true, of course, that œdema over the tibia might be the result of injury, or other causes; but where this œdema was found in both legs, and no local cause could be assigned for it, there could be no reasonable doubt that the patient had had syphilis.

The treatment which he advocated, Dr. Detmold said, was different from that ordinarily recommended in the text-books and from that ordinarily resorted to in practice; but his experience had been so extremely satisfactory with it that he did not hesitate to recommend it to others. Some years ago he was called upon to treat a gentleman suffering from syphilis who had such

an intolerance of mercury given in any of the ordinary ways that it was constantly necessary to suspend its administration, and, consequently, it seemed almost impossible to secure a permanent cure. Under these circumstances he determined to try the external use of a solution of bichloride of mercury, and accordingly directed the patient to rub one grain of corrosive sublimate, dissolved in half an ounce of water, upon his body every night and morning; applying it to each of the extremities in turn. The results thus obtained were far beyond his expectations, and, in consequence of the marked success of the method, he had scarcely employed any other treatment since. It never produced salivation or other inconvenience of any importance, produced no local effect upon the skin, was perfectly clean, and, what was of more consequence, was efficient. Occasionally he thought he had seen it produce some griping pains in the stomach after it had been continued for some time, and in some cases it seemed to cause a slight discoloration of the finger-nails; which, however, he supposed was simply attributable to the friction to which they were exposed in the rubbing. On the whole, therefore, he preferred this method of administering mercury to any other, and he was glad to say that it had now been followed with success in various hospitals. If those present had never employed it, he thought it would be worth their while to give it a trial whenever occasion should offer.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

THURSDAY evening, January 24, 1884, VICE-PRESIDENT SHAKESPEARE in the chair.

GENERAL TUBERCULOSIS OF SEROUS MEMBRANES.

Exhibited by DR. W. E. HUGHES.

Caroline K., white, aged seventeen, was admitted to the University Hospital November 3, 1883. There was a history of articular rheumatism in father and mother. The family was free from consumption. She herself had been perfectly well till eight months previous, when she developed symptoms of acute pleurisy. The acute symptoms subsided after a few days, and, with the exception of slight dyspnœa and hacking cough, she soon felt as well as before. Two months afterward she had pain, swelling, and redness involving successively all the large joints of the body, lasting ten weeks, and disappearing completely. From the onset of the articular symptoms her strength and flesh failed steadily, appetite grew poor, and digestion bad, dyspnœa and cough increased slightly. Five weeks before admission she began to have occasional sharp pains through the abdomen, and noticed that the abdomen was gradually enlarging. When first examined she was pale, somewhat emaciated, had hacking cough with mucous expectoration, slight constant dyspnœa, very little increased on exertion. The right pleural cavity was filled with fluid up to the third rib. The abdomen much distended with fluid free to move. The heart was normal in size, but there was a strong mitral systolic murmur. She had an irregular hectic fever. Under treatment the pleural effusion rapidly subsided, that in the abdomen less rapidly. One month after admission symptoms of meningitis developed, and examination of the eye-ground showed descending neuritis. A week afterward a double pericardial friction sound developed over the sternum opposite the third intercostal space. She died December 16th.

Autopsy seven hours after death. Thorax. Right pleural cavity completely obliterated by organized plastic adhesions. In the adhesions numerous gray miliary tubercles were found. Right lung congested, compressed, and contains scattered miliary tubercles. Left lung contains a few miliary tubercles. Pleura normal. Heart normal in size; marked thickening of mitral leaflets with incompetency. In the pericardium, at upper part of anterior surface of left auricle and over base of aorta, were a few small, grayish granulations, apparently tubercular. Peritoneal cavity contains about two quarts of straw-colored serum. Peritonæum everywhere thickly studded with gray miliary tubercles. Old peritoneal adhesions in several parts of abdomen, notably in left lumbar region and around pancreas. These old adhesions are filled with miliary tubercles. Lymphatic glands moderately enlarged, not cheesy. Numerous gray miliary tubercles in membranes of base of brain, especially in Sylvian fissures. No tubercles in any organs except the lungs.

TUBERCULAR ULCERS OF INTESTINES WITH PERFORATION.

Exhibited by DR. WILLIAM E. HUGHES.

William I., white, aged thirty, was admitted to the University Hospital April 16, 1883. His mother and a sister died of phthisis. He always took cold easily, and was never strong. Two years ago, after lifting a heavy weight, he had several slight pulmonary hæmorrhages. At that time he had no cough. Four months before admission he took a heavy cold. From that time up to his admission he had a dry, hacking cough with mucous expectoration, some dyspnœa, pleuritic pains on the right side, and a few small hæmorrhages. He lost twenty pounds. On admission there was in the lower part of the right pleural cavity an effusion localized in the posterior half. Over the right lung the respiration was somewhat roughened, with an occasional bronchitic rhonchus. The left lung was normal. Under treatment the effusion subsided, but consolidation commenced at the apex of the right lung. The consolidation went on to breaking down, and the same process commenced at the left apex. He gradually failed with the usual phthisical history. One month before death uncontrollable diarrhœa developed, with severe colicky pains and intense tenderness throughout the abdomen. He died December 26th of gradually increasing asthenia.

Autopsy three hours after death. Great emaciation. The right pleural cavity was completely obliterated by firm, old adhesions; on the left there were some adhesions at the apex; no fluid. The right lung had numerous small cavities in the apex; the lower two lobes were studded with miliary tubercles and small cheesy masses. The left lung was at the apex indurated with tubercular and cheesy deposits; in all other parts it was healthy; bronchial glands were enlarged. The heart weighed four and one half ounces. The aorta was slightly atheromatous. The liver weighed two and one half pounds, and was somewhat nutmeg in appearance. The spleen weighed two and two thirds ounces. The kidneys were normal in size and appearance. The intestines were everywhere adherent to each other and to the abdominal wall, and scattered through the adhesions and over the peritonæum were

a few miliary tubercles. The small intestine contained tubercular ulcers strung along its length from the lower part of the duodenum to the ileo-cæcal valve. They were about as numerous in the upper part of the intestine as in the lower. Several of these ulcers had perforated the peritoneal coat, but the contents of the intestine were prevented from exuding into the abdominal cavity by adhesions which had formed around the perforations to the neighboring peritoneal surfaces. There were a few tubercular ulcers in the colon. The mesenteric glands were enormously enlarged.

PHTHISIS FOLLOWING EMPYEMA; AMYLOID KIDNEYS; CANCER OF UTERUS.

Exhibited by Dr. William E. Hughes.

Amanda F., white, aged thirty-eight, was admitted to the University Hospital for cancer of the uterus. She had been a sewing woman, and had been much exposed to draughts. Her mother died of cancer of the uterus. There was no phthisical family history. One of her children died of tubercular meningitis. While in the hospital she complained of pulmonary symptoms, and physical examination of her lungs showed on the left posteriorly flatness down to midway between the spine and the angle of the scapula, with blowing, breathing, and gurgling râles, anteriorly tympany with metallic, cavernous breathing; at the base a small amount of fluid free to move. On the right hyper-resonance with exaggerated breathing, and at the apex moist râles. Her general condition was much below par. She had a troublesome loose cough, with free muco-purulent expectoration, and pleuritic pains through both sides of her chest. Five and a half years before she had taken a severe cold, from which she dated all her trouble. With the cold there had been severe pleuritic pain in the left side, some dyspnœa, and slight muco-purulent expectoration, occasionally streaked with blood. In a month she had lost twenty pounds. Afterward the acute symptoms disappeared, the pain grew less severe, the cough looser, and the expectoration quite profuse. She slowly lost ground till about a year before, when, after a succession of heavy colds, her condition deteriorated more rapidly. There was more dyspnœa, more cough, and an occasional rise of temperature preceded by chilliness. During this year she had several pulmonary hæmorrhages. For a month the frequency of micturition had been much increased, but the urine contained no albumen, though the quantity was increased and the specific gravity somewhat lowered. The first symptoms of cancer of the uterus had appeared about seven months before. For more than a month after admission she improved, then, a day after a rather profuse pulmonary hæmorrhage, she developed a typical uræmic condition. The urine was very scanty and loaded with albumen, but contained neither tube casts nor blood. The uræmic condition disappeared after two days, and the urine increased to its former quantity, all but a trace of the albumen disappearing. Two weeks after this, for the first time, a few waxy and epithelial casts were found in the urine. From this time on the quantity of urine passed daily varied from fifty ounces to seventy ounces, its specific gravity ranged between 1008 and 1015, and the quantity of albumen contained steadily increased till toward the end it became as much as one third of the bulk of the urine. At no time were very many tube casts present, though they were never absent they were either waxy or epithelial. She died January 1, 1884, of uræmia; which had gradually developed.

Autopsy five hours after death. Much emaciation. The left lung was compressed, atrophied, and firmly bound down in the posterior part of the pleural cavity. The remainder of the cavity contained gas and about eight ounces of sero-pus. The pleura was much thickened and transformed into a pyogenic membrane. The lung itself was hollowed out into a large cavity with suppurating walls by an extensive series of bronchial dilatations with more or less destruction of lung tissue. The lung was so torn in its removal that it was impossible to say whether or not there had been a communication between it and the pleural cavity. The right lung was emphysematous, and contained some tubercular and cheesy deposits at the apex. The heart weighed nine ounces, its right cavities contained an unusually developed ante-mortem clot closely moulded to the pulmonary valve. The kidneys weighed eleven and a half ounces, and presented very characteristic amyloid change. The body of the uterus was unchanged, but its cervix and the upper part of the vagina were destroyed by cancerous ulceration. There was no infiltration of the lymphatic glands. Other organs normal.

SECONDARY TUBERCULOSIS OF THE BLADDER, URETER, KIDNEY, AND SUPRARENAL BODY.

Exhibited by William E. Hughes, M. D.

Ida G., white, aged nineteen, had suffered with the usual symptoms of phthisis for about nine months before she came under observation. Her father and a sister had died of phthisis, and she had always taken cold on the slightest exposure. When first seen she was standing leaning over the back of a chair suffering the most agonizing pain in the region of the bladder. Desire to urinate was constant and irresistible, and the passage of the small quantities of urine gave rise to such suffering that she would shriek and almost faint. Till two weeks previous there had been no trouble with the urine, then the pain began, slight at first, and became gradually more and more severe. She had passed frequently masses of clotted blood with great suffering. Under anodynes the pain became less, and an examination of the bladder showed it to be much contracted with roughened walls. Examination also brought on a slight hæmorrhage. The urine contained nothing abnormal except blood and pus. Under the continued use of anodynes the pain decreased and finally disappeared. After the cessation of pain the blood disappeared from the urine, but was replaced about two months afterward by a small quantity of albumen and a few granular tube casts. About this time œdema began in the ankles and gradually involved the whole of the lower extremities. The tissues finally became so distended that her legs were utterly useless. The urine never contained more than one tenth of its bulk of albumen, and the tube casts were always few in number. She died of asthenia four months after coming under observation.

Autopsy fourteen hours after death. Extensive degeneration of lungs. Liver was extremely fatty, being of a uniformly yellow color with no distinction whatever between its lobules. The bladder was small and firmly contracted, its walls thickened, its inner surface roughened, rugose, papillomatous, its mucous membrane thickly studded with tubercle granulations. The substance of the right kidney contained numerous gray miliary tubercles, its pelvis was dilated and presenting

the same appearance as the inner surface of the bladder. The corresponding ureter was as thick as an index finger, its walls firm, hard, infiltrated with tubercular deposit, its mucous membrane in the same condition as that of the pelvis of the kidney. The right suprarenal body retained none of its original structure, it was a mass of cheesy tubercles firmly adherent to the kidney. The left kidney, as well as the other organs, was normal.

DR. FORMAD had examined these specimens for bacilli. None were found in the first case although the post mortem was made within about two hours after death and frozen sections at once cut. The lymph glands were also examined as well as the lungs without detecting any bacilli. In Dr. Hughes's second case the lymph glands as well as the perivascular spaces were crowded with colonies of bacilli. In the first case was an absolutely primary tuberculosis of the serous membranes with no bacilli, while in the second, *ulceration* was present with lymph gland bacilli as well as invasion of other tissues. This would indicate that bacilli and general tuberculosis most commonly result from surface troubles, that is, the mucous membrane of the lungs, intestines, etc., when affected by tuberculosis. In the case of tuberculosis of the serous membranes there was no history of a strumous diathesis, and no general tuberculosis ensued. From the careful study of ten similar cases Dr. Formad was inclined to think that serous tuberculosis was the only form of the disease to which *non strumous* individuals were liable.

DR. SHAKESPEARE said that he had been struck with the fact that the third case, with a family history of carcinoma, apparently developed tuberculosis after empyema, and that, post mortem, carcinoma of the uterus was found. An antagonism between these two diseases has been long believed in, but of late has been questioned, since a careful scrutiny of statistics has shown them to be more commonly associated than is generally believed. Dr. Shakespeare then called attention to the fact that in most cases a family history was obtained running back for only one generation, yet, there being no statement as to what degree the investigations had been carried, statistics drawn from such sources must be unreliable, as Dr. Formad, among others, has called attention to the fact that tuberculosis can and often *does* skip one generation. There were some points in the history of the case of tuberculosis of the serous membranes which suggested that the primary trouble might have arisen in the joints which are closely analogous to serous sacs, if they are not actually such.

DR. HUGHES said that in the patient where he had stated that the family history was good, he had gone back for three generations, directly and collaterally.

DR. MUSSER asked what was the effect of repeated tappings on the development of tubercle, as some clinical teachers are now advising against such operations in simple pleurisies, advocating in preference other remedies to induce rapid absorption of the effusion.

DR. J. C. WILSON thought this question could only be answered by an analysis of a large number of cases specially examined for this purpose.

DR. SHAKESPEARE having been informed by Dr. Hughes that the so-called tubercles in the case of carcinoma had not been examined microscopically suggested the reference of this specimen to the Committee on Morbid Growths, since it might really be only a case of miliary carcinosis and not tubercle. With reference to the influence of tapping on the development of tubercle the latter seemed to be most frequently developed where no tapping had been performed, but where rapid resorption had taken place. Pathological experiment has shown with what ease any innocuous substance, even simple traumatisms, will set up tuberculosis of the serous membranes. If, then, a general tuberculosis can result from tubercle of serous membranes — a point not settled as yet by experimenters — repeated tappings, with perhaps the coincident introduction of deleterious substances, might account for the alleged fact mentioned by Dr. Musser.

TUMOR OF THE ANTERIOR MEDIASTINUM WITH SECONDARY DEPOSITS IN THE HEART AND LUNGS.

Presented by DR. J. C. WILSON.

The specimens were removed from the body of an unmarried woman, aged sixty years, who died in the hospital of the Jefferson College, January 7, 1884. The patient had been singularly free from sickness until about eighteen months before coming to the hospital, three weeks prior to her death. The earliest symptoms were fixed pains of varying intensity in the sternal region, with attacks of palpitation and dyspnœa. These symptoms increased in severity, and were aggravated by exertion. After a time she began to experience difficulty in swallowing. Six weeks before admission to the hospital her feet and legs were for the first time observed to be swollen. The dropsy soon became general. She had no knowledge of her family history. On admission she suffered from constant dyspnœa, paroxysmal, often urgent, worse at night; inability to lie down; occasional unproductive cough; a sense of weight and oppression in the chest, and particularly in the precordial region; pain under the sternum; and great discomfort in swallowing. There was a high degree of general anasarca, and the evidences of pleural and peritoneal effusion. The surface was cool, the skin bluish. The examination of the chest was rendered difficult by the unusual thickness of the tissues, the patient being not only enormously dropsical, but also very fat, and the breasts being hugely developed. It was nevertheless noted that the impulse of the heart was feebly felt, the apex beating in the sixth interspace, and somewhat to the left of its usual position; that a faint systolic blowing murmur was heard at the apex, feebly propagated towards the left; that the heart sounds at the base were unusually obscure; and that the pulse was feeble, frequent, and irregular. There was flatness with absence of respiratory murmur at the base of the chest on both sides, and harsh, broncho-vesicular respiration over the upper regions of the chest. In the upper sternal region the cutaneous venous tinge was conspicuous without rising, as is sometimes seen, above the level of the skin. The veins were dilated and tortuous, and symmetrically arranged beyond the sternal borders, at which they abruptly ceased. The thyroid body was enlarged, and formed an egg-like projection in the median line. It was exceeding hard, but not sensitive nor the seat of pain. The patient regarded it with indifference, and said that *the lump* had existed for "many years."

I was, unfortunately, prevented from being present at the necropsy, and this tumor was not removed.

The boundaries of dullness in the pericardium could not be distinctly made out. It was, however, noted that the distribution of percussion signs absolutely negatived the existence of aneurism of the aortic arch as

their cause. The pupils were equal in size, and in response to light. The voice was unchanged. The radial pulses equal.

The patient died suddenly in an attack of dyspnœa at nine P. M. on the 7th of January.

Necropsy. Body much swollen and œdematous. Face and thorax very blue. Both the pleural sacs and the peritoneal cavity contained fluid in large amounts. Strong pleural adhesions on left side. The anterior mediastinum in its upper segment was occupied by a large, firm mass, mammilated in structure, extending from the notch of the sternum downwards for five inches, and adherent to the lung and the costal cartilages. The width was about three inches, and its depth, in an antero-posterior direction, about the same. It occupied exactly the position of the thymus gland. Its visceral surface was embossed, but smooth, and in its upper portions only adherent to the great vessels. No adhesions existed between the parietal pericardium covering its posterior surface and the visceral layer of the pericardium.

Recent Literature.

On Sterility in Woman. By J. MATTHEWS DUNCAN, M. D., LL.D. Philadelphia: P. Blakiston, Son & Co. 1884.

This book is a reprint of the Gulstonian Lectures delivered by Duncan in the Royal College of Physicians, London, in February, 1883. As the author says in his preface, "they form a mere outline sketch of the parts of the subject of which they treat"; yet they are sufficiently comprehensive to give the reader a clear idea of the subject as at present understood, and are replete with statistics and suggestions that will aid the student in further investigations.

The subject is treated under three heads: Nature and Amount, Theory or Causation, and Prevention and Cure. At the outset the author excludes from consideration those cases where conception is impossible on account of such causes as absence of the uterus or imperforation of the vagina. He then defines his subject under the heads of absolute sterility, where there is no conception, or where the impregnated ovum is lost without leading to what is recognizable as an early abortion; and of sterility not absolute, by which he means the failure to produce a viable child, while there is evidence of conception. He also deals with the condition known as relative or acquired sterility, by which is meant the failure to produce in number according to the conditions of age and length of married life, even though the woman may have borne one or more living children.

Under the head of Theory or Causation the author considers analogous conditions in vegetable and animal life, showing in what way fertility is affected by circumstances of heat and cold, over- or under-feeding, youth and old age, confinement and domestication. He points out the fact that plants frequently produce seeds apparently perfect, but which will not germinate; also that fowls produce eggs that will not hatch, although affording no evident imperfection: "that there are such ova in other animals and in women is highly probable; but in them the completeness of the demonstration is unattainable." The variations of sterility in woman according to the age at marriage is dwelt upon at some length, and the conclusion drawn that premature marriage is a cause of sterility. The causes of the comparative infertility of heiresses and the wives of peers are touched upon; and the allies of sterility, excessive production, pluriparity, and abortion receive adequate attention. Dysmenorrhœa, so frequently associated with sterility, especially the spasmodic variety, and other neurotic conditions, such as depraved or absent sexual appetite and pleasure, and so-called dyspareunia, are fully considered.

So far as the prevention of sterility is concerned, the author believes the best hopes of success lie in the avoidance of unions with immature or post-mature women, that is with women under twenty or over twenty-five, as he has shown the period between those extremes to be the best marriageable age with a view to fertility and the rearing of healthy children and the safety of the mothers: this prevention can of course only be attained by the diffusion of knowledge as to the probabilities of fertility according to the age at which marriage is entered upon. Under existing conditions of society, however, not much is to be hoped for in this direction; and certainly so far as the practical physician is concerned he must take things as he finds them and devote his attention to the search for, and removal of, other causes of sterility than those of age. In a certain proportion of cases the dysmenorrhœa, which is frequently the concomitant of sterility, may be found to be due to mechanical obstruction: in a certain other proportion intra-uterine or para-metric disease may be the cause upon which the sterility depends. But the author believes that local causes cover but a small proportion of the cases of sterility, and that the cure of the sterile condition is to be sought in the improvement of the general health and attention to the nutrition and hygiene of individual cases.

As a whole the book is not one which will commend itself to the mechanically disposed gynæcologist; but to the general physician and the medical economist we believe it will prove instructive and interesting.

C. M. G.

The Diagnosis of Diseases of the Spinal Cord. By W. R. GOWERS. Third Edition. Philadelphia: P. Blakiston, Son & Co. 1884.

Dr. Gowers has resisted any temptation to unduly increase the size of his book; it is the same compact, satisfactory little treatise in the third edition that it was in the earlier, and is well worth reading. A few symptoms have been considered a little more in detail; a section has been added in regard to the distinction of functional and organic disease.

The excess of "myotatic contractions" (the deep reflexes), which are found in cases of degeneration of the pyramidal tracts, are referred to changes in the gray substance of the cord in which the fibres of the pyramidal tracts are lost in its interlacing net-work of fine fibres and minute nerve cells. "The phenomena are best explained by the hypothesis that this structure, in the matrix of the gray matter, controls the muscle-reflex centres (of which the ganglion cells are part), and that the degeneration of the pyramidal fibres, which can be traced to the gray matter, invades this structure."

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THE METRIC SYSTEM AND THE PYRAMID OF GHIZEH.

As an example of a style of argument which is not infrequently brought to bear upon scientific questions we have been interested in a periodical which has just been launched upon the sea of journalism, and which is, in its own words, "a magazine devoted to the Preservation and Perfection of the Anglo-Saxon Weights and Measures and the Discussion and Dissemination of the Wisdom contained in the Great Pyramid of Jeezeh in Egypt." A model of the pyramid was displayed at the Foreign Exhibition in this city last fall, illustrating the peculiar theories of this Society. It is, in fact, to this ancient structure that the inch and the pound are to be ascribed. Though the cause is old the Society is new. It dates back, we are told, "only to noon of the eighth day of November, 1879, when at the Old South Church, Boston — that spot of wonderful memories and more wonderful prediction — we asked the blessing of God upon our undertaking, and the guidance of His Holy Spirit through the merits of His Son."

Of the ordinary arguments against the metric system this periodical makes not much account, save to say, for instance, that the value of the metre, 39.37 inches in length, is "a very awkward number," and that the metric system is "utterly deficient in availability" for the more comprehensive measures of the English system, in that it affords no separate table for liquids and solids, for surveyors', linear, and cloth measure. On other questions, such as the relative convenience of a decimal subdivision and of one into halves, quarters, etc., and the expense in time and money of putting the foreign system into use, there is room for diversity of opinion among sincere and honest men, and on them one may hear the pros and cons in every-day life. The Institute has a higher sphere. Its method is transcendental. The pith and marrow of the controversy is in the insidious attempt of the French and other European nations to subvert our Anglo-Saxon institutions and to foist upon us a "unit of measure born of infidelity and atheism in 1792." Shall we sell our birthright for a kilo of pottage? Never. It is not only on patriotic and ethnic but on religious grounds that we must resist the aggression of the corrupt despotisms of the Old World.

Have we not the divine command, "A just weight and a just measure shall ye have"? "Could the prophets of the Lord," asks the President of this Society in his inaugural address, "have so earnestly and so persistently declared for a just balance and a just measure if the origin of these was the result of *accident* or *caprice?*"

There being then a divinely appointed standard of measure, opposed to this wicked product of the French Revolution, it must be the Anglo-Saxon standard. Where can we find the original measure of that system? Obviously in that "venerable and stupendous monument which was erected, as we believe, for 'an Altar to the Lord in the midst of the land of Egypt and a Pillar at the border thereof to the Lord.' Isaiah, xix. 19." *Videlicet* the great pyramid of Jeezeh (Ghizeh). This is no problem fit for nineteenth century science. Go back to the time of Cheops and the fourth dynasty. Let no such question be discussed by the buyers and sellers of England and America. *Abeste profani.* On the sands of Egypt and beneath the everlasting smile of the Sphynx should its solution be sought. *The architect of the great pyramid used the British inch!* The diameter of the length of the granite floor of the king's chamber, the length of the king's chamber, and its diagonal diameter in inches multiplied by π all give integral numbers. The Anglo-Saxon inch is the talisman by which the circle can be squared! Elaborate mathematical formulæ involving the parallax of the sun (the diameter of the latter body, by the way, being given as 10″ less than the mean of all the best observations hitherto made) demonstrate that the inch is exactly one five-hundred-millionth of the polar diameter of the earth (said polar diameter being rather more than seven miles less than that accepted by practical astronomers). The fact that another mathematical contributor to the journal claims that the pyramid inch was $\frac{1}{989}$ greater than the British, and elsewhere asserts that the mysterious relations with π claimed for the standard inch are equally true for other values of the inch, seems in the mind of a layman to slightly weaken the force of the argument. But still it remains true, at least, that all accessible dimensions of the pyramid are capable of mensuration with the British yard-stick, and that fact can probably always be maintained against all cavil.

Not only does the pyramid give us our inch but our thermometric scale. Thus: The king's chamber begins at the fiftieth course of masonry. Hence the temperature of this room shall be 50° of the new scale. This corresponded on the occasion observed to 68° F. (or else should do so, from its being a perfect room, — the exact fact does not appear). Wherefore 250° Pyramid represents the boiling point of water. Thermometers on this scale have been constructed for the Society, and their general introduction is recommended. The centigrade scale, which savors of the abominable thing, is thus avoided. The Institute also proposes to take the meridian of the great pyramid as the zero point in its system of standard time.

On these vital grounds the International Institute sets out in its warfare on the metre. The adoption of this unit by the custom houses, marine hospitals, and coast survey fill it with undisguised alarm. The rec-

ognition of the metre by Congress is a usurpation. The Constitution authorizes it possibly to make changes in the system of weights and measures, but never to abolish the units. It is the duty of the "loyal and faithful citizen" to maintain a ceaseless vigil against that movement which, emanating from France, and sustained by the influence of Germany, Italy, Spain, Turkey, Egypt, Austria, Norway, and Sweden, is directed against the Anglo-Saxon world.

THE DETERMINATION OF SEX AT WILL.

SEVERAL years ago the JOURNAL[1] gave some account of the experiments of a gentleman named Fiquet upon a Texan cattle ranche in regard to the production of a desired sex at will, and the results at which he had arrived, with a somewhat limited experience, it is true, were detailed. He was enabled to predict the sex of calves in a dozen successive cases by preparing the bull and cow before coming together, the physiological hypothesis upon which he acted being that the sex would be the opposite of that of the more vigorous and eager progenitor. Mr. Fiquet reported that he had by experiments eliminated other theories as fallacious, and had finally been led to adopt this one and put it to practical tests by observations upon mankind.

Since then we have heard nothing more from Texas upon this subject, but singularly enough we get a large volume from London devoted to the elaboration of this principle, which applied to animals who can be selected and attuned to a given occasion with a chosen mate at a designated moment seems tolerably simple, although still hypothetical, but when extended to man becomes complex enough.

The writer of this octavo[2] of nearly three hundred pages on the Law of Sex states that he has spent twenty years of his life in studying the subject and its connected literature in various languages, and although his theory has been matured for several years its publication has been delayed until, by extensive observation, he "could establish its truth beyond the possibility of a doubt." This he evidently believes he has succeeded in doing so satisfactorily that he begins his preface with this sentence: "In the following pages I claim to make known a new discovery of a great law of Nature; nothing less than the law which governs the sexes, and whereby the sex of offspring can be controlled."

The "determination of sex" is almost as enticing to the average physiologist as the location of a new gold field to the average adventurer or the discovery of the philosopher's stone to the nearly extinct alchemist. The secret of making boys or girls at will is about as alluring as that of making gold or silver, or would be except in those places where it has been discovered by the sociologists that there is really very little difference between the sexes, and that such thinkers should care whether a given individual be a boy or a girl, though caring much whether it be a "radical or conservative," we, of course, do not believe. Still retaining ourselves, however, some of the old-fashioned ideas as to the distinct mission of the two sexes in the world's work, we have not lost our interest in the attempts, which from time to time get themselves into print, to evolve a law for the determination of sex at will, and in spite of the many preceding false starts are always ready to follow a new trail, especially when marked by a very promising sign-board indicating with confidence and precision a sure arrival at the heart of the mystery.

Hence we read undaunted through the first five chapters, or ninety pages, which are mainly devoted to setting forth the fallacies of previous and current theories, and reached with eagerness the sixth chapter which opens with the announcement that sex is determined by what the writer designates as the "superior parent;" also that the "superior" parent produces the opposite sex. This statement merely substituted a word we did not know how to interpret for everything else we did not understand. The author, apparently anticipating such a frame of mind on the part of the reader, apologizes for the expression as open to objections, but though not finding it entirely satisfactory still it is the best he could think of to express his meaning, which we prefer that he should assume the responsibility of making clear in his own words, as follows: "My difficulty in selecting a suitable designation for the controlling power in each case will be understood, when I state that among the numerous factors to be taken into account are the temperament, activity, energy, will, intellect, features, color, physique, bodily health, nutrition, etc., etc. The term 'superiority' will be used, but it must be understood to include all these, and to be susceptible of variation through temporary circumstances, — state of health, age, and the like; while the term '*inferiority*' will signify the opposite. The temperament and energy will be the more permanent elements of 'superiority;' but the invidious meaning of the word in ordinary social phraseology must be *altogether eliminated*. Let it be distinctly understood that '*superiority*' *here means everything that tends to increase functional energy* in any part of the system, and thus to influence the determination of sex; and it does not follow that this kind of 'superiority' must in all cases coincide with superiority in the general sense of the term — by which we imply superior mental and moral qualities. It may and often does happen that the two kinds of superiority are found together, but the coincidence is not necessary, and they are often, in fact, separated."

A little farther on we find: "Life, then, with all its phases must be the basis upon which to estimate 'superiority.'" And again: "*Cerebral development* is the key to *superiority* as understood in this work."

We did read the rest of Mr. Starkweather's book, but with a much diminished enthusiasm, and, as we carried with us a very vague comprehension of the

[1] Vol. cii., p. 471.

[2] The Law of Sex: Being an Exposition of the Natural Law by which the Sex of Offspring is Controlled in Man and the Lower Animals. And giving the Solution of Various Social Problems. With Forty Illustrative Portraits. By George B. Starkweather, F. R. G. S. London: J. & A. Churchill. 1883.

just interpretation of his word "superior," it is very probable under disadvantages. The "superior" bull of Mr. Fiquet was a comparatively simple creature; more food and better food, and a suitable seclusion, gave him the necessary advantage over a mate subjected to opposite conditions. The "superior" man, as previously described, is a very complex organism, which does not reveal itself so easily, and is not convenient to deal with when found.

We are not indisposed, in spite of our conservatism, to lend some credence to the statement that a "superior" father begets daughters, and are willing to regard a man, on the *post hoc propter hoc* principle, as "superior" because he has begotten daughters, and to extend the same, in strict impartiality, to mothers and sons; beyond this Mr. Starkweather has not succeeded in enlightening us with anything promising practical results. Other readers may be more fortunate, and for their encouragement we may state that, if the stamp of "superiority" is only recognized in the result of cohabitation, hopes are still held out that by a well considered lowering or elevation of the physical, mental, and moral tone (*morale*) on the one side and the other the mistake may still be corrected.

Where the temperamental equality of the parents is close slight causes will, of course, influence the sex of the offspring.[1] And time makes all things even, for the "superior" fathers of one generation transform themselves into the "superior" daughters and mothers of the next, and thus kindly Nature, even should we rob her of this mystery, will continue to balance her accounts and populate the earth.

MEDICAL NOTES.

— According to the *Révue Médicale*, M. Aimée Girard lately proposed at the Académie des Sciences the destruction of the bodies of animals dying of virulent diseases by means of sulphuric acid (as their interment does not always secure from the danger of contagion). M. Régnard thereupon resolved to try the effect of this substance on the human subject. His experiments with the bodies of new-born infants and fœtuses have been completely successful, and he believes would be equally so if tried on the adult. To the body of an infant he added about double its weight of the sulphuric acid of commerce, and after twenty-four or thirty hours of maceration not a vestige of the body remained, the decomposition having taken place silently and without any smell. Neither the microscope nor the test tube can detect the slightest trace of the body beyond the presence of some fat, phosphoric acid, and nitrogen. M. Régnard points out how easily a body may be made away with by means of a substance so easily procured, and suggests that some restrictions should be placed on its sale.

— In Manchester, Eng., a druggist dispensed "three pennyworth of quicksilver and three pennyworth of aqua fortis" to a man who wished to mix them to make some sort of an ointment. The man had bought these articles before, but they had always been put up separately. On this occasion they were put in the same bottle, which the man placed in his breast pocket, and left the shop. Very soon the bottle exploded, burning his face and eyes so seriously that he died at the Manchester Eye Hospital.

— The Senate of the United States has recently voted to recompense Surgeon E. P. Vollum, of the army, for the loss of his personal effects sustained by shipwreck while in the line of duty in the year 1856. The amount awarded is $700.

— Bermingham & Co., medical publishers, of 28 Union Square, who made an assignment on the 19th ult., have resumed business, the temporary embarrassment which caused the assignment having been removed, and the assignee having reassigned to said firm.

NEW YORK.

— A committee representing the Association for Improving the Condition of the Poor, one of the members of which was Dr. F. R. Sturgis, had a conference, on the 21st of February, with General Shaler and Dr. Woolsey Johnson, of the Health Department, with reference to the condition of the tenement houses of the city, the principal subject discussed being the insufficient water supply now existing in many of the houses, with its attendant uncleanliness and increased risk of disease. The committee also called the attention of the Health Commissioners to the fact that the law which requires the name of the owner or agent of every house inhabited by three or more families to be posted in the entrance had become a dead letter, and General Shaler assured them that if it was within the province of the Health Department to cause it to be done the law would be strictly enforced in the future.

— The German Society of the City of New York, which this year celebrates its centennial anniversary, has just published its annual report, prefacing it with some account of its history during the past hundred years. Among the institutions which it has been instrumental in founding are the German Hospital and Dispensary, and the report urges the necessity at the present time of a hospital for convalescents and incurables.

— The first annual report of the New York Skin and Cancer Hospital has just been published. In it the following figures in reference to the increasing mortality from cancer in New York City are given: In 1869 there were 304 deaths from cancer, being a little over one per hundred of deaths from all causes. In 1879 there were 572 deaths from cancer, or a trifle over two per hundred of all deaths, that is, in ten years the proportion of deaths from cancer had nearly doubled. In 1880 there were 659 deaths from cancer, or 2.06 per cent. of all deaths, the mortality from the disease being greater than that from scarlet fever, which amounted to 618. In 1881 cancer caused 707 deaths, and in 1882 731 deaths, while during the fourteen years mentioned there were 6843 deaths

[1] A convenient head under which to classify numerous exceptions to the law.

from it. Up to the time of the establishment of this hospital cancer patients were admitted to only one or two institutions in the city, and then not for the purpose of treatment, but simply to await the fatal termination of the disease, and nowhere in this country had cancer cases been grouped together with a view of studying the disease as to its nature and cure. The dispensary department of the hospital was opened on the 11th of January, 1883, and from that date to December 31st 767 patients were entered on the books, who made altogether 2708 visits. On the 24th of February a ward, with five beds for female patients, was opened, and afterwards twenty-nine beds were fitted up in the building, which is situated in Thirty-Fourth Street, between Second and Third Avenues. Five of these are reserved for males, and three for children. The total number of patients treated in the wards was seventy-six. The great need of the institution at the present time is for a country branch hospital, where chronic and offensive cases can be treated in small pavilion buildings, and a subscription toward this purpose has been started. It is hoped by this means to be able to receive any and every case of cancer needing hospital assistance, and in the end to have this department one of great magnitude and importance. Appropriate cases of skin disease would also be transferred to the country branch as circumstances required. During the year forty-nine cases of cancer (including sarcoma and epithelioma) were treated, of whom thirty-seven were females and twelve males. Among the other cases treated were one of elephantiasis Arabum, two of hydroa, one of keloid, two of leucoderma, and one of true leprosy. On the medical staff the principal physicians are Drs. L. Duncan Bulkley and George H. Fox, gynæcologist, Dr. James B. Hunter, and operating surgeons, Drs. Robert F. Weir and Edward L. Keyes.

— St. John's School at Manlius, New York, has been closed on account of the prevalence of diphtheria among the scholars.

Correspondence.

HARTZELL'S METHOD FOR STAINING THE TUBERCLE BACILLUS.

MR. EDITOR, — In your issue for February 14, 1884, you quote Dr. Hartzell's method for staining the tubercle bacillus, which he claims to be new, and to have the advantage over other methods of avoiding the use of nitric acid as the decolorizing agent. The latter is of course true; but at the same time that we get rid of the nitric acid we lose the *diagnostic* value of the Ehrlich method. This is proven by experiments which I have made with Dr. Hartzell's method in the last fortnight, using it exactly as he directs upon half a dozen distinct forms of micro-organisms. I find that they are all stained equally well by this method as is the tubercle bacillus. Therefore the method is only of value as an indication of the presence of micro-organisms in general, and should certainly not be relied upon for the diagnosis of any special form.

Dr. Gradle, using the same method of staining with the substitution of nitric acid for the oxalic acid recommended by Dr. Hartzell, says: "I found in most sputa a micrococcus in chains, and a bacillus a trifle longer and much thicker than the real tubercle bacilli. The latter, however, are stained much darker, and can be recognized besides by their size and shape. While, therefore, this method enables us to decide instantly whether the sought-for bacilli are absent in a sputum, any doubt as to their identity in case of their presence may be removed by the use of the more characteristic aniline method." [1]

The hope of preventing any more confusion by the adoption of faulty methods in the investigation of this subject must serve as my excuse for trespassing upon your space. Very truly yours,

HAROLD C. ERNST, M. D.

JAMAICA PLAIN, *February* 23, 1884.

Miscellany.

THE GOVERNMENT CONTROL OF THE UNITED STATES PHARMACOPŒIA.

THE *North Carolina Medical Journal* for February publishes the following excellent editorial on this subject: —

A bill has been introduced into the House of Representatives, by Mr. Randall, of Pennsylvania, to prepare and publish a national pharmacopœia. The chief of the Marine Hospital Service, of the Navy, and of the Army are each to detail two medical officers, and these officers are to invite the American Medical Association and the American Pharmaceutical Association to form committees of not more than three members, and thus constituted this board shall proceed to the work of forming a new pharmacopœia, said board having the power to add to its number from time to time as may in its judgment be necessary. Five thousand dollars are to be appropriated for carrying out the work.

No doubt this proposition will strike the profession in this country with surprise, more especially when the history of the Pharmacopœia is recalled. From the beginning the labor and expense of the production of this work has been undertaken and carried forward by enterprise. The few men who have been interested in it have given their time and labor with an ardor which does credit to the two professions from which they came. Furthermore, they had the wisdom to keep this work alive by their desire to promote the best interest of the profession, and we are quite sure that none would have resisted quicker than they any movement, even by implication, which would have surrendered the work to the general government. This is more than ever inferable when we remember, that in the early conventions the organization was completed before the officers of the army and navy were invited to take seats.

It will be surprising, therefore, to the profession, that there should have suddenly arisen an emergency which makes it now more necessary that "a national authorative standard" should be undertaken by the government.

The *Medical News*, it seems, is able to give a reason. In its issue of 9th February it says: "Unfortunately, since 1880 the United States Pharmacopœia has be-

[1] Bacteria and the Germ Theory of Disease, page 166.

come a matter of commercial speculation. While a vast amount of intelligent and well-directed labor was bestowed upon it by the Committee of Revision, taken as a whole it is by no means creditable to the science of the country, and complaints as to its inaccurary and the inconvenience of its methods have been numerous. Not only was it thus inferior to former revisions, but it was padded out into an absurdly large and clumsy volume, and supplied to the profession at an extravagant price wholly disproportionate to its former rate. That this departure from the time-honored course followed in former revisions should awaken widespread dissatisfaction was inevitable; and it was to be anticipated that the dissatisfaction would lead the government to supply a want which had always existed, but which had never before become so imperative as now."

Per contra, we consider it rather fortunate that the committee has been able to produce a volume that could attain to any sort of a commercial dignity instead of preparing revision after revision that did not possess any. We cannot agree either that the revision was supplied at an extravagant price, for had this been so the volume would not have been sought after so eagerly in the book market by such a large number of purchasers, a number far greater than for any previous edition however cheap. The medical and pharmaceutical professions were willing to pay the price asked for the work, just as they would for anything they thought worth the money.

As to the inferiority of the present revision as compared with previous ones, we will let the *British Medical Journal*, page 700 (October 1883) speak. The reviewer in that journal has been comparing the British Pharmacopœia, the German Pharmacopœia, and the United States Pharmacopœia (1880) and says: "In comparing the three Pharmacopœias, it must at once be conceded that the United States Pharmacopœia is incomparably the best. The previous revision was very poor, but the present revision is a very great improvement on the last. It contains an enormous mass of information, which is, however, chiefly of use to the pharmacist. Nevertheless it contains almost every possible preparation which can be needed by the medical practitioner."

We think the *Medical News* will be greatly disappointed in not finding "professional approval" [of the proposed National Pharmacopœia] "practically unanimous." Not a large number of men are going to give the matter a thought, if we are to judge by the past. But of those who do actively consider the subject, we believe that very few will have such poor memories as to overlook the undesirable basis upon which, by the conditions of this bill, the national pharmacopœia would be founded. An expensive and disappointing experiment has already been tried by attempting to combine such incongruous bodies as the Army, Navy, and Marine Hospital Service, and the result was the wrecking of the National Board of Health, through the ambition of the Marine Hospital Service. With this disaster staring a confiding profession in the face, it is now proposed to reform the old combination, and to attach enough civilian experts to the board to give it a general scientific character, and so avoid the suspicion of making it a purely government work.

We think when these facts are duly considered, if the profession of medicine and pharmacy are to have any voice in the matter, they will more nearly unanimously reject the proposition.

Another point. The whole movement as set forth first in the Randall Bill, and in the approving editorial of the *Medical News*, has too much of the color of rivalry between New York and Philadelphia not to be understood by non-residents of those favored cities. Some of the gentlemen of the latter city have never been able to disguise their dissatisfaction at the departure of the Pharmacopœia from them, and we do not believe a word of complaint against the scientific part of the present revision of the Pharmacopœia would have been sounded had the business management been to the liking of the complainants.

But we assert, even if the proposed plan is excellent in every respect, there is no reason why a new Pharmacopœia should be compiled at an earlier date than 1890. We are willing to take the opinion of the *British Medical Journal* upon this subject, and repeat that the U. S. Pharmacopœia is incomparably the best in any language, and a wise Congress will not willingly interrupt the course of a scientific body, pursuing its work zealously and honestly, and at its *own expense*.

THE GRANT OF £10,000 TO THE PHYSIOLOGICAL LABORATORY OF OXFORD CONSIDERED AS A "NATIONAL DISASTER."

AFTER two pages of print devoted to various woes and horrors of the preceding week, among which appears a statement of the slaughter of twenty-three hundred Egyptian soldiers and eighteen European officers, the *Spectator* of February 9th exhibits the following paragraphs, which, if found in anything except an anti-vivisection organ, would be mildly characterized as amazingly silly: —

"Not the least of the disasters of the week — if we look at it from the point of view of the principle involved, — is the carrying in the Oxford Convocation on Tuesday of the decree voting £10,000 to the physiological laboratory at Oxford, without any sort of restriction on the vivisectional experiments which — for the purposes of research — may be carried on there. The Dean of Christ church proposed the decree, expressing the most perfect confidence in the kindness and humanity of Professor Sanderson, — a confidence which will be present or absent, according to what is understood by kindness and humanity, and that is precisely the matter in dispute. Mr. Freeman, the historian, made a very masterly speech, showing that the students and teachers of all branches of knowledge were understood to pursue these subjects under those general restrictions involved in refraining from using blameworthy means. You might revive gladiatorial shows or bull-baiting, he said, to throw a new light on history, but any one who did so would be severely condemned. Only in the case of physiology was a vote of money proposed such as could never have been got out of the University for such an object as the new School of Art at Athens, in order to foster a method of research which did not scruple to do what for any other purpose all men would condemn.

"The other speakers were chiefly favorable to the vote. The Warden of Keble surprised and grieved a great many of his friends by deprecating at this stage resistance to the vote. Professor Acland, in the silky accents familiar to the University, dilated, in what has been termed a 'beautiful speech,' on the thesis that

nothing more directly conducive to the cause of humanity has ever been conceived than the vivisectional method of investigation, and no doubt he may have convinced some of his more innocent hearers that, in the interests of the dumb creation, they should at once put themselves in training for bland and loving acts of vivisection. Dr. Pope made a not very judicious speech on the other side, and then the decree was carried by one hundred and eighty-eight votes against one hundred and forty-seven; majority, forty-one."

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 16, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diphtheria and Croup.	Typhoid Fever.	Scarlet Fever.
New York	1,340,114	694	270	16.52	17.52	5.60	.98	2.10
Philadelphia	927,995	379	125	17.01	15.93	4.05	3.78	5.40
Brooklyn	644,526	—	—	—	—	—	—	—
Chicago	632,100	170	75	20.30	7.54	6.38	2.32	2.90
Boston	423,800	167	60	17.40	14.40	8.40	.60	1.80
Baltimore	408,520	166	73	21.00	15.00	6 60	—	1.20
St. Louis	400,000	160	63	20.16	6.93	10.70	—	1.89
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	34	8	17.64	23.52	2.94	—	5.88
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	—	—	—	—	—	—	—
Milwaukee	142,400	53	21	22.68	7.56	7.56	1.89	5.67
Providence	119,405	39	8	15.36	17.92	5.12	7.68	—
New Haven	62,882	28	9	25.00	10.71	7.14	—	7.14
Nashville	54,400	16	7	6.25	12.50	—	—	—
Charleston	52,286	—	—	—	—	—	—	—
Lowell	71,447	26	7	7.70	19.25	3.85	—	3.85
Worcester	69,442	9	5	11.11	44.44	11.11	—	—
Fall River	62,674	22	7	9.10	9.10	9.10	—	—
Cambridge	60,995	13	6	7.69	30.76	—	—	—
Lawrence	45,516	15	8	13.33	13.33	—	—	—
Lynn	44,895	12	4	16.66	8.33	16 66	—	—
Springfield	38,090	13	2	15.38	15.38	15.38	—	—
Somerville	31,350	—	—	—	—	—	—	—
Holyoke	30,515	8	5	25.00	12.50	—	12.50	—
New Bedford	30,144	10	2	—	40.00	—	—	—
Salem	29,503	11	4	18.18	9.09	—	—	9.09
Chelsea	24,347	9	2	11.11	22.22	—	—	—
Taunton	22,693	2	0	—	50.00	—	—	—
Gloucester	21,400	5	2	—	40.00	—	—	—
Haverhill	20,905	8	2	12.50	12.50	—	—	—
Newton	19,421	3	1	—	—	—	—	—
Brockton	18,323	3	1	—	—	—	—	—
Malden	15,273	2	1	50.00	—	50.00	—	—
Newburyport	13,947	3	0	—	100.00	—	—	—
Fitchburg	13,433	5	2	—	40.00	—	—	—
Seventy-six Massachusetts towns	326,292	79	16	7.56	17.60	5.04	—	2.52

Deaths reported 2164: under five years of age, 796: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 377, lung diseases 365, consumption 333, diphtheria and croup 141, scarlet fever 65, diarrhœal diseases 38, typhoid fever 35, measles 30, cerebro-spinal meningitis 23, malarial fevers 15, erysipelas 13, whooping-cough 10, puerperal fever seven, small-pox three. From *diarrhœal diseases*, New York 15, Boston 11, St. Louis four, Chicago, Baltimore, and Buffalo two each, Providence and Haverhill one each. From *measles*, New York 12, Baltimore 11, Philadelphia four, New Haven two, St. Louis one. From *cerebro-spinal meningitis*, New York eight, Chicago three, Philadelphia and Milwaukee two each, Baltimore, Buffalo, New Haven, Lawrence, and Salem one each. From *malarial fevers*, New York nine, Baltimore four, St. Louis two. From *erysipelas*, New York five, Philadelphia and Baltimore two each, St. Louis, Milwaukee, Lawrence, and Holyoke one each. From *whooping-cough*, New York five, Philadelphia and Baltimore two each, Chelsea one. From *puerperal fever*, St. Louis three, New York two, Philadelphia and Milwaukee one each. From *small-pox*, Philadelphia, St. Louis, and Nashville, one each.

Five cases of small-pox were reported in St. Louis; scarlet fever 35, diphtheria 21, and typhoid fever six in Boston; scarlet fever nine and diphtheria seven in Milwaukee.

In 95 cities and towns of Massachusetts, with an estimated population of 1,377,016 (estimated population of the State 1,955,104), the total death-rate for the week was 16.28 against 19.26 and 16.59 for the previous two weeks.

For the week ending January 19th, in 167 German cities and towns, with an estimated population of 8,621,321, the death-rate was 24.8. Deaths reported 4107; under five years of age, 1952; consumption 572, lung diseases 528, diphtheria and croup 273, diarrhœal diseases 125, measles and rötheln 82, scarlet fever 69, whooping-cough 65, typhoid fever 47, puerperal fever 27, small-pox (Zittau one) one. The death-rates ranged from 13.2 in Metz to 39.2 in Essen; Königsberg 33.5; Breslau 32; Munich 28.2; Dresden 26.8; Berlin 22.7; Leipzig 35.4; Hamburg 24.7; Cologne 25.2; Frankfort a. M. 17.8; Strasburg 22.

For the week ending January 19th, in the Swiss towns, there were 25 deaths from consumption, lung diseases 25, diarrhœal diseases 13, diphtheria and croup seven, whooping-cough seven, measles four, typhoid fever three, scarlet fever two, small-pox two, puerperal fever one. The death-rates were, at Geneva 19.4; Zurich 15.8; Basle 13.2; Berne 26.7.

The meteorological record for the week ending February 16th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Feb., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 10	30.445	34	40	28	69	66	70	68	NW	NW	N	17	8	6	F	O	O	—	—
Mon., 11	30.515	31	35	26	77	78	100	85	NW	NE	NE	5	5	4	O	O	S	—	—
Tues., 12	30.307	32	36	27	100	100	100	100	NW	E	E	3	7	6	S	O	R	—	—
Wed., 13	29.902	47	58	33	100	96	100	99	SE	SW	SW	7	13	6	R	R	O	—	—
Thurs., 14	29.813	46	59	36	93	83	61	79	SW	W	NW	8	19	12	O	O	O	—	—
Fri., 15	30.426	24	36	19	73	57	70	67	NW	NW	NW	23	14	12	O	F	C	—	—
Sat., 16	30.672	28	34	16	46	88	86	73	NW	E	S	7	9	4	F	O	F	—	—
Mean, the Week.	30.297	34.4	42.4	26.2				81.6										32.25	—

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., sleet; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM FEBRUARY 16, 1884, TO FEBRUARY 21, 1884.

PERIN, GLOVER, lieutenant-colonel and surgeon, medical director, is granted one month's leave of absence, with permission to apply at Division Headquarters, Missouri, for an extension of one month. S. O. 16, Department of Dakota, February 9, 1884.

WILSON, GEORGE F., first lieutenant and assistant surgeon. Assigned to duty at Fort Walla Walla, W. T. S. O. 14, Department of the Columbia, February 5, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING FEBRUARY 23, 1884.

NASH, F. S., passed assistant surgeon, detached from the U. S. S. Dispatch, and waiting orders.

RUSH, W. H., passed assistant surgeon, detached from the Minnesota, and ordered to duty on board the Dispatch.

HALL, J. H., passed assistant surgeon, to the Minnesota.

ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION AT BELFAST. MEETING OF THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

WE have received from Sir William MacCormac the following announcement in regard to the meetings of the British Medical Association at Belfast, and of the International Medical Congress at Copenhagen, next July and August, from which those desirous of attending will see how they can best combine both occasions.

The fifty-second annual meeting of the British Medical Association will be held on July 29, 30, and 31, and August 1, 1884, at Belfast, under the presidency of James Cuming, M. A., M. D., Professor of Medicine, Queen's College, Belfast. The Address in Medicine will be delivered by Sir Andrew Clark, Bart., M. D., F. R. C. P., Physician and Lecturer on Clinical Medicine, London Hospital. The Address in Obstetric Medicine will be delivered by George H. Kidd, M. D., F. R. C. S. I., Master of the Coombe Lying-in Hospital, Dublin. The Address in Physiology will be delivered by Peter Redfern, M. D., F. R. C. S. E., Professor of Anatomy and Physiology, Queen's College, Belfast.

Visitors coming from America to attend this meeting can travel by any of the following routes: —

(1.) A Cunard steamer will leave (*a*) New York on Wednesday, July 16th, arriving in Queenstown about the following Thursday week, July 24th. (*b.*) Boston on Saturday, July 19th, reaching Queenstown the following Monday week, July 28th.

(2.) A White Star steamer will leave New York on Saturday, July 12th, and on Saturday, July 19th; due at Queenstown about July 20th and July 27th.

(3.) An Inman steamer will leave New York on Tuesday, July 15th; due at Queenstown about July 23d.

(4.) An Allan steamer will leave Quebec on Saturday, July 19th, arriving in Londonderry about the 26th or 28th July.

(5.) An Anchor steamer will leave New York on Saturday, July 19th; due at Londonderry on July 29th.

Londonderry is ninety-five miles from Belfast, and trains run daily between the two places.

The route from Queenstown to Belfast is from Queenstown to Cork, Cork to Dublin (one hundred and sixty-five miles by train), and Dublin to Belfast (one hundred and thirteen miles).

MEETING OF THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

The time of the meeting of the British Medical Association at Belfast has been fixed so as not to interfere with the International Medical Congress, which is to begin at Copenhagen on 10th August.

A steamer will leave Hull (England) on August 2d and 9th for Copenhagen; and on August 5th a steamer will leave Leith (Scotland) for Copenhagen. Both these places (Hull and Leith) can be reached on any day by leaving Belfast on the previous evening by the cross-channel steamers. Visitors after attending the meeting of the British Medical Association in Belfast will have ample time to travel to Copenhagen for the Congress.

Communications in reference to the meeting of the British Medical Association at Belfast to be addressed to the Honorable Local Secretaries, John Moore, M. D., Alex. Dempsey, M. D., John W. Byers, M. A., M. D.

SUFFOLK DISTRICT MEDICAL SOCIETY. SURGICAL SECTION. — There will be a meeting of the Section at 19 Boylston Place on Wednesday evening, March 5th, at 7.45 o'clock. Communication: Excision of a Portion of Intestine, including part of the Ileo-Cœcal Valve, for the Cure of Fæcal Fistula in the Right Groin, Dr. C. B. Porter. S. J. MIXTER, *Secretary.*

DEATH. — Died, at Williamstown, Mass., February 24, 1884, Henry Lyman Sabin, M. D., M. M. S. S., aged eighty-three years.

APPOINTMENT. — Dr. E. N. Whittier has been appointed Visiting Physician at the Massachusetts General Hospital.

BOOKS AND PAMPHLETS RECEIVED. — A Manual of Medical Jurisprudence, with Special Reference to Diseases and Injuries of the Nervous System. By Allan McLane Hamilton, M. D. With Illustrattons. New York: Bermingham & Co. 1883.

The Hip and its Diseases. By V. P. Gibney, A. M., M. D., Professor of Orthopædic Surgery in the New York Polyclinic, etc. New York: Bermingham & Co. 1884.

A Manual of Obstetrics. By A. F. A. King, M. D., Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Columbian University, etc. With Fifty-Nine Illustrations. Second Edition. Philadelphia: Henry C. Lea's Son & Co. 1884.

Original Articles.

GENERAL PARALYSIS OF THE INSANE.

BY GEORGE F. JELLY, M. D.

I CANNOT hope to add anything to the already existing knowledge of this disease, but its rapid increase in modern times, its insidious beginning in many instances, the importance of its early detection, and its fatal character, make it one of the most interesting of brain diseases, and I shall narrate briefly a few cases which have come under my personal observation at the McLean Asylum and in private practice.

The French physicians first described general paralysis as a distinct disease. Esquirol recognized insanity with paralysis as incurable, but looked upon the latter symptom simply as a complication and not as a part of the disease.

In 1822 M. Bayle for the first time noted that the mental disturbance and paralysis were synchronous. M. Delaye in 1824 thought it not always accompanied by insanity, and that it was a softening or atrophy of the brain.

In 1826 M. Calmeil gave a most complete account of the disease, and has therefore generally been regarded as its discoverer.

General paralysis may be defined as a disease of the brain marked by general and progressive loss of coördinating power over the muscles, especially those of speech and locomotion, with greater or less impairment of sensation, always tending to dementia, and characterized by a sense of well being or actual delusions of an exalted character.

It is essentially a disease of civilization and of modern times, is much more common in the cities than in the country, and attacks by preference the robust and vigorous rather than the sick or those whose constitutions are weak congenitally or from the effects of disease.

More than any other serious mental disease it appears in persons in whom insanity is not an inheritance, chiefly in men who are in the prime of life, from thirty-five to fifty years of age. It is rare in persons under thirty or over sixty. I have seen one case in a man of twenty-six, and within a fortnight have examined a man sixty-four years old who presented all the characteristic symptoms of the disease. Most of the cases coming under my own observation have been in persons between forty and fifty. In women the disease is comparatively rare, but I am unable to give definite statistics in regard to the relative proportion between men and women. It is about one in ten or twelve.

There are at the present time at the Taunton Hospital ten male and three female paretics; at the Worcester Hospital there are twelve male and one female paretics; and at the Danvers Hospital there are forty-one male and fourteen female paretics, — making a total of eighteen females in a total of eighty-one cases, which I should think a larger proportion than usual. The whole number of patients in the three hospitals is two thousand and fifty-six — nine hundred and eighty-four men, and one thousand and seventy-two women.

The most common causes of general paralysis are excessive drinking, excessive sexual indulgence, overwork, and excessive or prolonged mental anxiety. Not infrequently some shock or acutely painful impression upon the moral sensibilities seems to furnish the additional weight needed to overcome a brain already tottering. So important a part does this strain or shock often play as a cause of this disease that the late Dr. Tyler was accustomed to say that the case was rare in which it was not a factor. General paralysis is described as having three periods: —

(1.) Commencement period or period of incubation.
(2.) Maniacal period.
(3.) Period of chronic mania, lapsing into dementia, with utter prostration of mind and body.

These periods often run into each other, and the first may escape the notice of friends and even of physicians unless they are accustomed to observe patients affected with this disease, but sooner or later it presents both motor and mental symptoms, which are characteristic, and if the disease runs its course and no intercurrent disease supervenes no portion of the body escapes.

In the first period the patient may simply be noticed to have changed, to be more irritable, more easily excited, less able to attend to business, more forgetful, less careful of money, and less shrewd in bargains. There is, if I may so express it, a peculiar "damaged" condition of mind, which gives the friends anxiety, but of which the patient is entirely unconscious. It is during this early stage that the patient may commit irregularities in business and in his moral conduct, may wreck his own and others' fortunes, and may ruin the reputation and prospects of his entire life. Hence the necessity of the early recognition of the disease, that its victim may be restrained in some way and protected from himself. There soon develops some difficulty in articulating certain words, especially those abounding in consonants; there is a tremor of lips and tongue, like that of a person about to weep; and it is observed that he drags one or both feet in walking. He now becomes extravagant and passes into the period of excitement. He considers himself all-powerful, believes that he owns everything, and talks constantly of the most extensive projects — a trip to the moon, pumping the Atlantic Ocean dry, and invents wonderful machines. At this time he is often very licentious, and talks much of his sexual powers and his influence over women. He is indifferent to his friends, is untidy in dress, and does not observe the proprieties of life. He may become violent at the slightest provocation, especially if any attempt is made to control or oppose him, and then is very dangerous, his weakened mind being capable of great fury, resembling the excitement following an epileptic seizure.

While in the excited period he is often taken to an insane hospital. There he soon settles down and becomes contented and happy, and owns the whole establishment. He considers himself well, and his complacency and self satisfaction continue through the whole course of the disease. The delusions change rapidly; there is great incoherence; when questioned he contradicts himself, and when his delusions are proved false he may admit their falsity in one moment and reassert them the next. Hallucinations of sight and hearing are not infrequent.

Sometimes epileptic or apoplectic seizures occur among the earliest symptoms, especially those of an

[1] Read before the Boston Society for Medical Improvement, February 25, 1884.

epileptic nature, which may be the first warning of the serious nature of the malady. During the progress of the disease they are very common, and may cause death at any time, and if frequent the mental failure is very rapid.

In the later stages of the disease the paralysis increases, until he is no longer able to walk at all; the difficulty in articulation becomes worse, and produces a mere unintelligible jargon; the mind becomes incapable of any effort whatever; the sphincters are relaxed, and the patient dies from exhaustion; from choking owing to inability to swallow; suddenly, from convulsions or apoplexy; from serous effusion into the brain, or from some intercurrent disease, as pneumonia, diarrhœa, or septicæmia from bedsores.

The incipient stage may be one of melancholia instead of exaltation, which, however, is comparatively rare, and is distinguished from ordinary melancholia by the greater mental weakness; there is no method, and there are no connected and good arguments.

The writing of a general paralytic is characteristic, and is often one of the first symptoms to attract attention. At first only a certain tremulousness may be noticed; then words are left out and misspelled, and as the disease progresses the tremulousness and indistinctness are more and more marked until the writing is entirely illegible.

The peculiarities in walking arise from the loss of coördinating power and increasing paralysis. The gait is stiff, the patient moving with a jerking, uncertain movement, though he may walk fast. He easily trips, and sooner or later shuffles, and as he progresses a peculiar straddling gait is seen, and finally he drags his legs after him in an indefinite, peculiar manner, as if they did not belong to him. Sometimes the gait is high stepping, and the patient walks with erect head.

There is always more or less paralysis of sensation, which increases as the disease advances, and the sensibility finally disappears.

The condition of the patellar tendon reflex is of some diagnostic value. In certain cases it is exaggerated, in others normal, and in still others below normal. In the majority of cases where there is any change it is supra-normal in the early stages of the disease.

Well-marked exaggeration in both legs is strong corroborative evidence of general paralysis; diminution or absence of it is decidedly less so, but has some value.

Where patellar reflex is absent disordered gait is among the first symptoms. There is generally inequality of the pupils, in some cases there is dilatation of both pupils, and sometimes the pupils are both abnormally small, mere pin holes, as in a case which I have had under observation for several months.

There is often no great change in the temperature of general paralytics. It averages a little above normal, but there is nothing diagnostic in it. There is a noticeable difference between the morning and evening temperature, and the prognosis as to time may be based to a certain extent upon the amount of this variation rather than upon any great or continuous elevation.

An ophthalmoscopic examination of the eyes of general paralytics often reveals atrophy of the optic disks, but as this change is frequent in other forms of cerebral disease its existence is corroborative rather than diagnostic.

The diagnosis in well-marked cases of general paralysis is easy, no other disease presenting the same combination of symptoms, excitement, extravagance, loss of memory, tremor of lips and tongue, and impairment of gait.

Sometimes in the somewhat rare cases where maniacal excitement is the earliest symptom, and there is no defect in the speech and no trouble in walking, even if delusions are extravagant, it may be difficult to make a positive diagnosis between general paralysis and acute mania. We must then await developments before giving a positive opinion. There are, however, certain impressions of general mental weakness which such cases give which will help very much in forming a decided opinion. Later in the disease there may again be difficulty, unless the physician is furnished with a full history of the case from its commencement. Advanced dementia, with hesitation in speech, may give rise to some doubt, but the absence of the peculiar muscular tremors in lips and tongue, and the optimistic view of things taken by general paralytics, even when very feeble, will help settle the diagnosis.

In the epileptic seizures of general paralysis the tongue is seldom bitten, the insensibility following a fit is much more deep, and the impairing effect of each seizure is much more apparent than in true epilepsy. In the grand mal of epilepsy the outcry which precedes the convulsion is characteristic, but is not heard in general paralysis.

Sometimes locomotor ataxia has been mistaken for general paralysis, but the general history of the case and the absence of mental symptoms would eliminate the latter disease.

The prognosis in this disease is always unfavorable. Remissions of active symptoms, which may continue for some months even, are not very unusual, but a relapse and eventual death must be expected. A few cases of recovery have been reported, but they lack the confirming test of time. The average duration of general paralysis is from two to three years, though a few cases have lived five, and, it is said, even ten and twelve years. I have in mind two undoubted cases, perfectly characteristic in every respect, one of which is of eight years' and the other of six years' duration. Much will depend in each case upon the violence or acuteness of the symptoms, the previous history of the individual, and the care which he receives.

In one of our public institutions, whose superintendent is a very careful and accurate observer, a patient with general paralysis was considered a case of locomotor ataxia for a year, till the development of disease made the diagnosis plain. A comparison of the symptoms of the two diseases shows the following differences: —

GENERAL PARALYSIS.	LOCOMOTOR ATAXIA.
Mental symptoms generally though not always first. Motor symptoms secondary.	Motor symptoms primary, following acute pain in distal part.
Extravagant delusions and violence.	Mental symptoms secondary, and are failing memory, with gradual impairment, without excitement.
Great sexual excitement.	No sexual desire and loss of sexual power.
Progress rapid.	May extend over ten or twelve years.
From above down.	From below up.

Very little can be said in regard to treatment. It must be mainly palliative, and directed to rendering less rapid the ravages of the disease. Quiet, a carefully regulated life, and the removal from everything which has a tendency to excite are essentials, and when there is much excitement these can rarely be attained outside of an insane hospital. Various emergencies and conditions call for medical treatment, and sedatives, tonics, and in the later stages stimulants may be useful, but nothing curative can be hoped for from any treatment.

The pathology of general paralysis is still debatable ground, but is admitted to be a degenerative inflammation of the cortical portion of the brain. Its inflammatory character is denoted by the post-mortem appearances. Those most commonly seen are adhesions of the dura mater, the vessels of which are often distended, and on its inner surface are found layers of hæmorrhagic exudation. The arachnoid is milky and thickened, studded with Pacchionian granules, and united to the dura mater. It is sometimes separated from the pia mater by effusion, and sometimes firmly adherent to it.

The pia mater and the cerebral cortex present the most pathognomonic signs of the disease. It adheres to the convolutions so intimately that portions of the latter come away with it, leaving a reddened surface. These appearances are seen chiefly in the frontal, posterior central, and parietal regions. The points of adhesion may be few or numerous, but are confined to the summits of the gyri. When the pia mater is removed the cortical substance is found atrophied in cases of average duration. Not only is there atrophy of the cortex, but also small capillary apoplexies may be seen. If the patient dies early in the disease we do not find the adhesions of the later stages, but only hyperæmia, with some opacity of the arachnoid. The vessels of the brain are often tortuous and varicose, and their walls are thickened; this is especially true of the veins of the pia mater. There may be effusions of serum or blood into the ventricles and sinuses, which fill the place of the atrophied brain.

There may be the same changes in the spinal cord and its membranes, but Westphal does not connect these appearances with the diseased conditions found in the brain (which is the true seat of the disease), and thinks them independent of each other. General paralysis is essentially a cerebral disease.

Dr. Blandford, in his work on Insanity and its Treatment, says: "That the cortex is the seat of this disease can hardly be doubted if we reflect that after all it is an insanity resembling in many respects the ordinary non-fatal insanity which we term mania. The 'pars affecta' is one and the same. The line of demarkation between ordinary insanity and general paralysis is exceedingly fine, and the whole history of the latter points to a difference in degree rather than in kind. That general paralysis is intractable and progressive is the fact that we are certain of. The hyperæmia which accompanies curable mania subsides and the disease vanishes. The hyperæmia of general paralysis becomes a slowly advancing inflammation which destroys the tissue."

CASE I. I. G., aged forty-three, single, merchant. Admitted to the McLean Asylum July 22, 1869. No insanity in family. He has been a man of very convivial habits. One year before admission he found himself unable to do his work, and retired from business. Of late he has been very extravagant, restless, and excited. His excitement passing beyond the control of his friends, he was sent to the asylum. On admission his speech was thick and his lips tremulous; he was self-satisfied and extravagant. Memory poor.

August 31st. He is the most contented and happy patient in the house. Is becoming stout. Thinks himself a very expert player of whist and euchre, but cannot follow the game. Becomes gradually duller and thicker.

In January, 1870, speech more impaired.

March 8th, eight months after admission, was semiconscious for an hour and a half, and the next day there was a repetition of the same condition. After these seizures the thickness of speech and dullness of intellect increased. Strange and deluded. Believed that the Lord was in his room. His mother died about this time, but when told of it he was affected only momentarily.

April 2d. Very restless, full of wants and schemes. Says that his mother is alive, and wishes to go to her. Is noisy at night and destructive. Losing flesh.

One month afterwards he had an apoplectic seizure, and could not swallow for twenty-four hours. After this he rallied, but was very weak and incoherent.

June 7th. Could walk with difficulty, and could take only liquid nourishment, but was in the best of spirits; considered his room magnificent, and believed himself quite well and possessed of great physical strength.

A month later he became highly excited, noisy, very filthy, and utterly incoherent. This excitement told upon his strength, and after being confined to his bed a week with symptoms of effusion he died, after one year's residence in the asylum, and two years from the commencement of the disease.

CASE II. F. A. B., aged thirty, married, innkeeper. Admitted August 31, 1869. For three months had been queer and excited. Much worried by the enforcement of prohibitory liquor law. On admission very much excited; believed himself Napoleon I. Speech thick, lips tremulous, gait enfeebled and shuffling.

His condition January 21, 1870, five months after admission, was much the same, except that he had advanced in dementia and feebleness. His delusions continued, and after nine months' residence in the asylum he was transferred to the Boston Lunatic Hospital, where he died within two years from the commencement of the disease.

CASE III. W. B., aged forty-five, widower, lawyer, native of New Hampshire. Admitted May 12, 1870. His father was subject to periods of depression. Patient was married ten years since, but his wife lived only six weeks. Her early death gave rise to talk on the part of his acquaintances, and he was blamed though there seems to have been no reason to believe him in fault. He had a lawsuit with his father-in-law about his wife's property, was defeated, became sullen and morose, and has since lived much by himself, and has dwelt upon his treatment by others. Has considerable property in real estate, and has had a very annoying class of tenants. Two years ago became very licentious, and he has been much addicted to masturbation.

For months his friends have noticed a change, and think that he has not appeared natural. Three weeks before admission he seemed very dull and stupid, was

much troubled with nausea, and it was noticed that there was difficulty in articulation, and that he dragged his feet. He soon rallied from this condition, talked much and at random on business matters, and wrote many letters full of wild projects. When he came to the asylum talked extravagantly of his plans and schemes, and his speech and walk were affected. Had much to say of buying elephants to do his farm work, said that an acre or two adjoining would be worth $25,000, styled himself the Astor of New Hampshire. Remained at the asylum willingly, and was at once at home. Said all the implements on his farm, including troughs for the pigs, were of solid silver. There was no great change for a month except that he increased in extravagance, and manifested more excitement, and was very obscene. He masturbated on all possible occasions. During next two months there was great excitement accompanied by threats, great irritability, and violence. During the next two months he was more quiet, and less extravagant, decidedly more sane, and generally quite gentlemanly in his conduct, but tremor of lips and mental enfeeblement were always apparent. He then became more unsettled and excitable, and had several dull, partially insensible attacks without convulsions, during which he vomited, and after which he was always weaker, more confused, and more excited. Often his attempts to talk were mere jargon, and his gait very feeble. These alternations continued steadily, he lost ground mentally and physically, and his incoherence and exalted ideas increased. Fifteen months after admission had his first epileptiform attack when exercising out-of-doors. From the early attacks he rallied, but they soon became very frequent, and he failed much more rapidly. His extravagance continued, and so long as he could talk he spoke constantly of his great sexual power, his powerful influence with the female sex, and insisted that Queen Victoria, whose daughter he had married, had built him a golden palace in the centre of his farm.

He died in epileptic convulsions three years and six months after admission to the asylum, and not far from five years from the first appearance of the disease. No autopsy.

(*To be continued.*)

CLINICAL ASPECTS OF CEREBRAL SYPHILIS.[1]

BY HORATIO C. WOOD, M. D.,

Professor of Diseases of the Nervous System in the University of Pennsylvania.

Paralysis. — When it is remembered that a syphilitic exudation may appear at almost any position in the brain, that spots of encephalic softening are a not rare result of the infection, that syphilitic disease is a common cause of cerebral hæmorrhage — it is plain that a specific palsy may be of any conceivable variety, and affect either the sensory, motor, or intellectual sphere. The mode of onset is as various as the character of the palsy. The attack may be instantaneous, sudden, or gradual. The gradual development of the syphilitic gumma would lead us, *à priori*, to expect an equally gradual development of the palsy; but experience shows that in a large proportion of the cases the palsy develops suddenly, with or without the occurrence of an apoplectic or epileptic fit. Under these circumstances it will be usually noted that the resulting palsy is incomplete; in rare instances it may be at its worst when the patient awakes from the apoplectic seizure, but mostly it progressively increases for a few hours, and then becomes stationary. These sudden partial palsies probably result from an intense congestion around the seat of disease, or from stoppage of the circulation in the same locality; but whatever their mechanism may be, it is important to distinguish them from palsies which are due to hæmorrhage. I believe this can usually be done by noting the degree of paralysis.

A suddenly developed, *complete* hemiplegia, or other paralysis, may be considered as in all probability either hæmorrhagic or produced by a thrombus so large that the results will be disorganization of the brain substance, and a future no more hopeful than that of a clot. On the other hand, an *incomplete* palsy may be rationally believed to be due to pressure or other removable cause, and this belief is much strengthened by a gradual development. The bearing of these facts upon prognosis it is scarcely necessary to point out.

Although the gummæ may develop at almost any point, they especially affect the base of the brain, and are prone to involve the nerves which issue from it. Morbid exudations, not tubercular nor syphilitic, are very rare in this region. Hence a rapidly but not abruptly appearing strabismus, ptosis, dilated pupil, or any paralytic eye symptom in the adult, is usually of syphilitic nature. Syphilitic facial palsy is not so frequent, whilst paralysis of the nerve from rheumatic and other inflammation within its bony canal are very common. Paralysis of the facial may therefore be specific, but it is of no diagnostic value. Since syphilitic palsies about the head are in most instances due to pressure upon the nerve trunks, the electrical reactions of degeneration are present in the affected muscles.

There is one peculiarity about specific palsies which has already been alluded to as frequently present, namely, a temporary, transient, fugitive, varying character and seat. Thus an arm may be weak to-day, strong to-morrow, and the next day feeble again, or the recovered arm may retain its power, and a leg fail in its stead. These transient palsies are much more apt to involve large than small brain territories. The explanation of their largeness, fugitiveness, and incompleteness is that they are not directly due to clots or other structural changes, but to congestions of the brain tissues in the neighborhood of gummatous exudations. It is easily seen why a squint will remain when the accompanying monoplegia disappears.

Motor palsies are more frequent than sensory affections in syphilis, but hemianæsthesia, localized anæsthetic tracts, indeed any form of sensory paralysis, may occur. Numbness, formications, all varieties of paræsthesia are frequently felt in the face, body, or extremities. Violent peripheral neuralgic pains are rare, and generally when present denote neuritis. Professor Huguenin, however, reports [2] a case in which a severe trigeminal anæsthesia dolorosa had existed during life, as the only cerebral symptom, and death occurring from lung disease, a small gumma was found on the sella turcica pressing upon the Gasserian ganglion.

The special senses are liable to suffer from the invasion of their territories by cerebral syphilis, and the

[1] Continued from page 200.

[2] Schwiez. Corr. Blat., 1875.

resulting palsies follow courses and have clinical histories parallel to those of the motor sphere. The onset may be sudden, or gradual, the result temporary or permanent. Dr. Charles Mauriac[1] reports a case in which the patient was frequently seized with sudden attacks of severe frontal pain and complete blindness, lasting from a quarter to half an hour; at other times the same patient had spells of aphasia lasting only for one or two minutes. In a case still under my care with unmistakable signs of cerebral syphilis the man was suddenly and unaccountably seized with complete deafness which after some days disappeared in the course of a few hours. Like other syphilitic palsies, therefore, paralyses of special senses may come on suddenly or gradually, and may occur paroxysmally.

Among the palsies of cerebral syphilis must be ranked aphasia. An examination of recorded cases shows that it is subject to vagaries and laws similar to those connected with other specific cerebral palsies. It is usually a symptom of advanced disease, but may certainly develop as one of the first evidences of cerebral syphilis.

Coming on after an apoplectic or epileptic fit, it may be complete or incomplete: owing to the smallness of the centre involved, and the ease with which its function is held in abeyance, a total loss of word thought is not so decisive as to the existence of cerebral hæmorrhage as is a total motor palsy. Like hemiplegia or monoplegia, specific aphasia is sometimes transitory and paroxysmal. Dr. Buzzard[2] records several such cases. Dr. Charles Mauriac[3] details a very curious case in which a patient, after long suffering from headache, was seized by sudden loss of power in the right hand and fingers, lasting about ten minutes only, but recurring many times a day. After this had continued some time the paroxysms became more completely paralytic and were accompanied by loss of power of finding words, the height of the crises in the palsy and aphasia being simultaneously reached. For a whole month these attacks occurred five or six times a day, without other symptoms except headache, and then the patient became persistently paralytic and aphasic, but finally recovered.

To describe the different forms of specific aphasia and their mechanism of production would be to enter upon a discussion of aphasia itself, a discussion out of place here. Suffice to say that every conceivable form of the disorder may be induced by syphilis.

Owing to the centres of speech being situated in the cortical portion of the brain, aphasia in cerebral syphilis is very frequently associated with epilepsy. Of course right-sided palsy and aphasia are united in syphilitic as in other disorders. If, however, the statistics given by M. Tanowsky[4] be reliable, syphilitic aphasia is associated with left-sided hemiplegia in a most extraordinarily large proportion. Thus in fifty-three cases collected by Mr. Tanowsky, eighteen times was there right-sided hemiplegia, and fourteen times left-sided hemiplegia, the other cases being not at all hemiplegic. Judging from the autopsy on a case reported in Mauriac's brochure this concurrence of left-sided paralysis and aphasia depends partly upon the great frequency of multiple brain lesions in syphilis, and partly upon the habitual involvement of large territories of the gray matter secondarily to diseased membrane. An important practical deduction is that the conjoint existence of left hemiplegia and aphasia is almost diagnostic of cerebral syphilis.

Probably amongst the palsies may be considered the disturbances of the renal functions, which are rarely met with in cerebral syphilis, and which are probably usually dependent upon the specific exudation pressing upon the vaso-motor centres in the medulla. Fournier speaks of having notes of six cases in which polyuria with its accompaniment, polydipsia, was present, and details a case in which the specific growth was found in the floor of the fourth ventricle. Cases have been reported in which true saccharine diabetes has been present,[5] and I can add to these an observation of my own. The symptoms, which occurred in a man of middle age with a distinct specific history, were headache, nearly complete hemiplegia, and mental failure, associated with the passage of comparatively small quantities of a urine so highly saccharine as to be really a syrup. Under the influence of the iodide of potassium the sugar in a few weeks disappeared from the urine.

Epilepsy. — Epileptic attacks are a very common symptom of meningeal syphilis, and are of great diagnostic value. The occurrence in an adult of an epileptic attack, or of an apoplectic fit, or of a hemiplegia after a history of intense and protracted headache, should always excite grave suspicion.

Before I read Professor Fournier's work on Nervous Syphilis, I taught that an epilepsy appearing after thirty years of age was very rarely, if ever, essential epilepsy, and unless alcoholism, uræmic poison, or other adequate cause could be found was in nine cases out of ten specific; and I therefore quote with satisfaction Professor Fournier's words: "L'épilepsie vraie, ne fait jamais son premier début à l'âge adulte, à l'âge mûr. Si un homme adulte, au dessus de 30, 35 à 40 ans, vient à être pris pour la première fois d'une crise épileptique, et cela dans la cours d'une bonne santé apparente, il y a, je vous le répète, huit ou neuf chances sur dix pour que cette épilepsie soit d'origine syphilitique."

Syphilitic epilepsy may occur either in the form of petit mal or of the haut mal, and in either case may take on the exact characters and sequence of phenomena which belong to the so-called idiopathic or essential epilepsy. The momentary loss of consciousness of petit mal will usually, however, be found to be associated with attacks in which, although voluntary power is suspended, memory recalls what has happened during the paroxysm; attacks, therefore, which simulate those of hysteria, and may lead to an error of diagnosis.

Even in the fully-developed type of the convulsions the aura is only rarely present. Its absence is not, however, of diagnostic value, because it is frequently not present in true essential epilepsy, and it may be pronounced in specific disease. It is said, that when in an individual case the aura has once appeared, the same type or form of approach of the convulsion is thereafter rigidly adhered to. The aura is sometimes bizarre; a severe pain in the foot, a localized cramp, a peculiar sensation, indescribable and unreal in its feeling, may be the first warning of the attack.

In many, perhaps most cases of specific convulsions, instead of a paroxysm of essential epilepsy being closely simulated, the movements are in the onset, or, more

[1] Aphasie et Hemiplégie droite Syphilit., Paris, 1877.
[2] Loc. cit., p. 81.
[3] Loc. cit., page 31.
[4] L'Aphasie Syphilitique.
[5] Consult. Servantié, Des rapports du Diabéte et de la Syphilis. Paris Thèse, 1876.

rarely, throughout the paroxysm, unilateral; indeed, they may be confined to one extremity. This restriction of movement has been held to be almost characteristic of syphilitic epilepsy, but it is not so. Whatever diagnostic significance such restriction of the convulsion has is simply to indicate that the fit is due to a cortical organic lesion of some kind. Tumors, scleroses, and other organic lesions of the brain cortex are as prone to cause unilateral or monoplegic epilepsy when they are not specific as when they are due to syphilis.

Sometimes an epilepsy, dependent upon a specific lesion implicating the brain cortex, may be replaced by a spasm which is more or less local and is not attended with any loss of consciousness. Thus, in a case now convalescent in the University Hospital, a man, aged about thirty-five, offered a history of repeated epileptic convulsions, but at the time of his entrance into the hospital, instead of epileptic attacks, there was a painless tic. The spasms, which were clonic, and occurred very many times a day — sometimes every five minutes — were very violent and mostly confined to the left facial nerve distribution. The trigeminus was never affected, but in the severer paroxysms the left hypoglossal and spinal accessory nerves were profoundly implicated in all of their branches. Once, fatal asphyxia from recurrent laryngeal spasm of the glottis was apparently averted only by the free inhalation of the nitrite of amyl. The sole other symptom was headache, but the specific history was clear, and the effect of antisyphilitic remedies rapid and pronounced.

Psychical Symptoms. — As already stated, apathy, somnolence, loss of memory, and general mental failure are the most frequent and characteristic mental symptoms of meningeal syphilis, but, as will be shown in the next chapter, syphilis is able to produce almost any form of insanity, and therefore mania, melancholia, erotic mania, delirium of grandeur, etc., etc., may develop along with the ordinary manifestation of cerebral syphilis, or may come on during an attack which has hitherto produced only the usual symptoms. Without attempting any exhaustive citation of cases, the following may be alluded to: —

Dr. A. Erlenmeyer reports[1] a case in which an attack of violent headache and vomiting was followed by paralysis of the right arm and paresis of the left leg with some mental depression; a little later the patient suddenly became very cheerful, and shortly afterwards manifested very distinctly delirium of grandeur with failure of memory. Dr. Batty Tuke reports[2] a case in which with aphasia, muscular wasting, strabismus, and various palsies there were delusions and hallucinations.

In the same journal, April, 1869, Dr. S. D. Williams reports a case in which there were paroxysmal violent attacks of frontal headache. The woman was very dirty in her habits, only ate when fed, and existed in a state of hypochondriacal melancholy.

M. Leiderdorf details a case with headache, partial hemiplegia, great psychical disturbance, irritability, change of character, marked delirium of grandeur, epileptic attacks, and finally dementia, eventually cured with iodide of potassium.[3] Several cases illustrating different forms of insanity are reported by Dr. N. Manssurow.[4]

[1] Die luëtischen Psychosen.
[2] Journ. Ment. Sci., January, 1874, page 560.
[3] Medizin. Jahrbücher, xx., 1864, p. 114.
[4] Die Tertiäre Syphilis, Wein., 1877.

That the attacks of syphilitic insanity, like the palsies of syphilis, may at times be temporary and fugitive, is shown by a curious case reported by Dr. H. Hayes Newington,[5] in which along with headache, failure of memory, and ptosis in a syphilitic person there was a brief paroxysm of noisy insanity.

DISEASES OF BRAIN SUBSTANCE.

The psychical symptoms which are produced by syphilis are often very pronounced in cases in which the paralysis, headache, epilepsy, and other palpable manifestations show the presence of gross brain lesions. In the study of syphilitic disease of the brain membranes sufficient has been said in regard to these psychical disturbances, but the problem which now offers itself for solution is as to the existence or non-existence of syphilitic insanity, that is, of an insanity produced by specific contagion without the obvious presence of gummatous disease of the brain membranes. Very few alienists recognize the existence of a distinct affection entitled to be called syphilitic insanity, and there are some who deny that insanity is ever directly caused by syphilis. It is certain that insanity often occurs in the syphilitic, but syphilis is abundantly joined with alcoholism, poverty, mental distress, physical ruin, and various depressing emotions and conditions which are well known to be active exciting causes of mental disorder. It may well be that syphilis is in such way an indirect cause of an insanity, which under the circumstances could not be properly styled syphilitic.

If there be disease of the brain cortex produced directly by syphilis, of course such disease must give rise to mental disorders, and, if the lesion be situated in such a way as to affect the psychic and avoid the motor regions of the brain, it will produce mental disorder without paralysis, that is, a true insanity; again, if such brain disease be wide spread, involving the whole cortex, it will cause a progressive mental disorder, accompanied by gradual loss of power in all parts of the body and ending in dementia with general paralysis; or, in other words, it will produce an affection more or less closely resembling the so-called general paralysis of the insane, or dementia paralytica.

As a man having syphilis may have a disease which is not directly due to the syphilis, when a syphilitic person has any disorder there is only one positive way of determining how far said disorder is specific, namely, by studying its amenability to antisyphilitic treatment. In approaching the question whether a lesion found after death is specific or not, of course such a therapeutic test as that just given is inapplicable. We can only study as to the coexistence of the lesion in consideration with other lesions known to be specific. Such coexistence of course does not absolutely prove the specific nature of a nutritive change, but renders such nature exceedingly probable.

What has just been said foreshadows the method in which the subject in hand is to be here examined, and the present chapter naturally divides itself into two sections: the first considering the coexistence of anatomical alterations occurring in the cerebral substance with syphilitic affections of the brain membranes or blood-vessels, the second being a clinical study of syphilitic insanity.

In looking over literature I have found the following cases in which a cerebral sclerotic affection coincided with a gummatous disease of the membrane. Gross

[5] Journ. Ment. Sci., London, xix., 555.

and Lancereaux [1] report a case having a clear syphilitic history, in which the dura mater was adherent to the skull. The pia mater was not adherent. Beneath, upon the vault of the brain, was a gelatinous exudation. The upper cerebral substance was indurated, and pronounced by M. Robin after microscopic examination to be sclerosed. At the base of the brain were very atheromatous arteries and spots of marked softening.

Dr. Jos. J. Brown [2] reports a case in which the symptoms were melancholia, excessive irritability, violent outbursts of temper, very positive delusions, disordered gait ending in dementia. At the autopsy, which was very exhaustive, extensive syphilitic disease of the vessels of the brain and spinal cord was found. The pia mater was not adherent to the brain. The convolutions, particularly of the frontal and parietal lobes, were atrophied with very wide sulci, filled with bloody serum. The neuroglia of these convolutions was much increased and "appeared to be more molecular than normal, the cells were degenerated and in many places had disappeared, their places being only occupied by some granules." These changes were most marked in the frontal convolutions.

H. Schule reports [3] a very carefully and meritoriously studied case. The symptoms during life exactly simulated those of dementia paralytica. The affection commenced with an entire change in the disposition of the patient; from being taciturn, quiet, and very parsimonious, he became very excited, restless, and desiring continuously to buy in the shops. Then failure of memory, marked sense of well-being, carelessness and indifference for the future, developed consentaneously with failure of the power of walking, trembling of the hands, inequality of the pupils, and hesitating speech. There was next a period of melancholy, which was, in time, followed by continuous failure of mental and motor powers, and very pronounced delirium of grandeur, ending in complete dementia. Death finally occurred from universal palsy with progressive increase of the motor symptoms. At the autopsy characteristic syphilitic lesions were found in the skull, dura mater, larynx, liver, intestines, and testicles. The brain presented the macroscopic and microscopic characters of sclerosis and atrophy; the neuroglia was much increased, full of numerous nuclei, the ganglion cells destroyed. The vessels were very much diseased, some reduced to cords; their walls were greatly thickened, and full of long, spindle-shaped cells, sometimes also containing fatty granules.

Dr. C. E. Stedman and Robert T. Edes report [4] a case in which the symptoms were failure of health, ptosis, trigeminal palsy with pain (anæsthesia dolorosa), finally mental failure with gradual loss of power of motion and sensation. At the autopsy the following conditions were noted: apex of the temporal lobe adherent to dura mater and softened; exuded lymph in neighborhood of optic chiasm; sclerosis of right Gasserian ganglion, as shown in a marked increase of the neuroglia; degeneration of the basal arteries of the brain.

These cases are sufficient to demonstrate that sclerosis of the brain substance not only may coexist with a brain lesion, which is certainly specific in its character, but may also present the appearance of having developed *pari passu* with that lesion, and from the same cause.

It has already been stated in this memoir that cerebral meningeal syphilis may coexist with various forms of insanity, and cases have been cited in proof thereof. It is, of course, very probable that in some of such cases there has been that double lesion of membrane and gray brain matter which has just been demonstrated by report of autopsies; further, if we find that there is a syphilitic insanity, which exists without evidences of meningeal syphilis, and is capable of being cured by antispecific treatment, such insanity must be considered as representing the disease of the gray matter of the brain. Medical literature is so gigantic that it is impossible to exhaust it, but the list of cases given in the Table (see p. 224) is amply sufficient to prove the point at issue, namely, that there is a syphilitic insanity which exists without obvious meningeal disease, and is capable of being cured by antisyphilitic treatment.

A study of the brief analyses of symptoms given in the Table shows that syphilitic disease of the brain may cause any form of mania, but that the symptoms, however various they may be at first, end almost always in dementia unless relieved.

Of all the forms of insanity general paralysis is most closely and frequently simulated by specific brain disease. The exact relation of the diathesis to true incurable general paralysis it is very difficult to determine. It seems well established that amongst persons suffering from this disorder the proportion of syphilitics is not only much larger than normal, but also much larger than in other forms of insanity. Thus Dr. E. Mendel [5] found that in 146 cases of general paralysis 109, or seventy-five per cent., had a distinct history of syphilis, whilst in 101 cases of various other forms of primary insanity only eighteen per cent. had specific antecedents.

Various opinions might be cited as to the nature of this relation between the two disorders, but for want of space the curious reader is referred to the work just quoted, and to the thesis of C. Chauvet [6] for an epitome of the most important recorded opinions.

Those who suffer from syphilis are exposed in much greater proportion than are other persons to the ill effects of intemperance, sexual excesses, poverty, mental agony, and other well-established causes of general paralysis. It may be that in this is sufficient explanation of the frequency of general paralysis in syphilitics, but I incline to the belief that syphilis has some direct effect in producing the disease. However this may be, I think we must recognize as established the opinion of Voisin [7] that there is a syphilitic periencephalitis which presents symptoms closely resembling those of general paralysis. Such cases are examples of the pseudo-paralysie générale of Fournier.[8]

The question as to the diagnosis of these cases from the true incurable paresis is, of course, very important, and has been considered at great length by Voisin,[9] Fournier,[10] and Mickle.[11]

The points which have been relied upon as diagnostic of syphilitic pseudo-general paralysis are: —

1 Affect. Nerv. Syphilis, 1861, page 245.
2 Journ. Ment. Science, July, 1875, page 271.
3 Allgem. Zeitschrift f. Psychiatrie, xxviii., 1871-1872.
4 Amer. Journ. Med. Sci., lxix., 433.
5 Progres. Paral. der Irren, Berlin, 1880.
6 Influence de la Syph. sur les Malad. du Syst. nervuex, Paris, 1880.
7 Paralysie générale des Aliénés, 1879.
8 La Syphilis du Cerveau, Paris, 1879.
9 Loc cit.
10 Loc cit.
11 Brit. and For. Medico-Chirurg. Review, 1877.

No.	Reporter and Journal.	Symptoms.	Results. Remarks.
1	Louis Streisand. Die Lues als Ursache der Dementia. Inaug. Diss. Berlin, 1878.	Epilepsy, delirium of exaltation, alteration of speech, headache, failure of memory.	Rapid cure with mercury.
2	Ibid.	Delusions, delirium, general mania, great muscular weakness.	Cure with mercury.
3	Dr. Müller, of Lautkirch. Journ. of Mental Dis., 1873-74, 561.	Symptoms resembling general paralysis, and diagnosis of such made until a sternal node was discovered	Cure by iodide of potassium.
4	Fr. Esmarch and W. Jersen. Allgem. Zeitschrift f. Psychiatrie.	Sleeplessness, great excitement, restlessness, great activity, incoherence and violence.	Cure by mercury.
5	M. Leidesdorf. Medizin. Jahrbücher, xx., 1864, 1.	Complete mania, played with his excrement, and entirely irrational.	Complete cure by iodide of potassium.
6	Dr. Beauregard. Gaz. Hebdom. de Sci. Med. de Bordeaux, 1880, page 64.	Symptoms resembling those of general paralysis.	Cure by iodide of potassium.
7	M. Rendu. Ibid.	Loss of memory, headache, irregularity of pupils, ambitious delirium, periods of excitement, others of depression, embarrassment of speech, access of furious delirium, ending in stupor.	Mercurial treatment, cure.
8	Ibid.	Hypochondria, irregularity of pupils, headache, failure of memory, melancholy, stupor.	Mercurial treatment, cure.
9	Dr. Albrecht Erlenmeyer. Die luëtischen Psychosen, Neuwied, 1877.	Melancholia, with hypochondriasis, sleeplessness, fear of men, and belief they were all leagued against him.	Iodide of potassium, cure.
10	Ibid.	Religious melancholia, with two attempts at suicide, ending in mania.	Iodide of potassium, cure.
11	Ibid.	At times very violent, yelling, shrieking, destroying everything she could get hands on, at times erotomania; no distinct history of infection, but her habits known to be bad, and had bone ozæna and other physical syphilitic signs.	Iodide of potassium, cure.
12	Ibid.	Epileptic attack, followed by a long soporose condition, ending in mental confusion, he not knowing his nearest friends, etc.; almost dementia.	Cured by mercurial inunction.
13	Ibid.	Great fear of gend'armes, etc., mania, with hallucinations, loud crying, yelling, etc., then convulsion, followed by great difficulty of speech.	Cured by mercurial inunctions, with iodide internally; subsequently return of convulsions, followed by hemiplegia and death.
14	Ibid.	Great unnatural vivacity and loquacity, wanted to buy everything, bragged of enormous gains at play, etc.; some trouble of speech.	Iodide of potassium, cure. Attended to business, and seems as well as before. Relapsed. (See Symptoms.)
—	Ibid. Relapse of Case 14.	Fifteen months after discharge from asylum relapse; symptoms developing very rapidly, delirium of grandeur of the most aggravated type, with marked progressive dementia, failure of power of speech, and finally of locomotion.	Failure of various antispecific treatment.
15	Dr. A. Erlenmeyer. Die luëtischen, etc.	Failure of mental powers, inequality of pupils, trembling of lip when speaking, uncertainty of gait, almost entire loss of memory, once temporary ptosis and strabismus.	Iodide of potassium in ascending doses failed. Recovery under mercurial inunctions.
16	Ibid.	Failure of mental powers, pronounced delirium of grandeur, hallucinations of hearing, failure of memory, strabismus and ptosis coming on late.	Iodide of potassium, corrosive sublimate injections. Cure.
17	Ibid.	Failure of memory and mental powers, slight ideas of grandeur, disturbance of sensibility and motility, aphasia coming on late.	Cure with use of iodide and mercurial inunctions.
18	Ibid.	Melancholy, great excitability, ideas of grandeur, after a long time sudden ptosis and strabismus.	Iodide of potassium failed: mercurial course improved; joint use cured patient.
19	Ibid.	Various cerebral nerve palsies, great relief by use of mercurial inunctions, then development of great excitement, delirium of grandeur, failure of memory and mental powers, and finally death from apoplexy; no autopsy.	
20	Dr. J. B. Chapin. Amer. Journ. Insanity, vol. xv., p. 249.	Melancholia, with attempted suicide, epilepsy, headache, somnolent spells.	Iodide of potassium, cure.
21	Ibid.	Acute mania, noisy, very destructive; syphilitic disease of tibia.	Iodide of potassium, cure.
22	Dr. Snell.	Maniacal excitement.	Cured by specific treatment.
23	William Smith. Brit. Med. Journ., July, 1868, page 30.	Apathetic melancholy, indelicate, speaking only in monosyllables, and much of the time not at all, sullen and menacing.	Rapidly cured by conjoint use of iodide and mercurial. The symptoms first developed three months after chancre.

The occurrence of headache, worse at night, and present amongst the prodromes.

An early, persistent insomnia or somnolence; early epileptiform attacks.

The exaltation being less marked, less persistent, and, perhaps, less associated with general maniacal restlessness and excitement.

The articulation being paralytic rather than paretic.

The absence of tremulousness, especially of the upper lip (Fournier).

The effect of antispecific remedies.

When the conditions in any case correspond with the characters just paragraphed, or when any of the distinguishing characteristics of brain syphilis, as previously given in this memoir, are present, the probability is that the disorder is specific and remediable. But the absence of these marks of specific disease is not proof that the patient is not suffering from syphilis. Headache may be absent in cerebral syphilis, as also may insomnia and somnolence. Epileptiform attacks are not always present in the pseudo-paralysis, and may be present in the genuine affection. A review of the cases previously tabulated shows that in several of them the megalomania was most pronounced, and a case with very pronounced delirium of grandeur in which the autopsy revealed unquestionably specific brain lesions may be found in Chauvet's Thesis, page 31.

I have myself seen symptoms of general paralysis occurring in persons with a specific history in which of these so-called diagnostic differences the therapeutic test was the only one that revealed the true nature of the disorder. In these persons a primary immediate diagnosis was simply impossible.

Case XIV. of our table is exceedingly interesting because it seems to represent as successively occurring in one individual both pseudo and true general paralysis. The symptoms of general paralysis in a syphilitic

subject disappeared under the use of mercury to return some months afterwards with increased violence, and with a new obstinacy that resisted with complete success antisyphilitic treatment. Such a case is some evidence that syphilis has the power to produce true general paralysis.

In conclusion I may state that it must be considered as at present proven that syphilis may produce a *disorder whose symptoms and lesions do not differ from those of general paralysis; that true general paralysis is very frequent in the syphilitic; that the only perceptible difference is one of curability; that the curable sclerosis may change into or be followed by the incurable form of the disease.* Whether under these circumstances it is philosophic to consider the so-called pseudo-general paralysis and general paralysis as essentially distinct affections each physician can well judge for himself.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, M. D.

ANTHROPOLOGY.

A NUMBER of leading German anthropologists and anatomists have agreed to a scheme [1] determining a number of starting-points for measurements of the skull, which, if universally accepted, will do much to establish uniformity. The only feature of the scheme we will mention is the determination of the horizontal level of the skull, which is evidently of much importance, and which has already been referred to in these reports. The horizontal plane is the one determined by two straight lines which, on either side, connect the lowest point of the border of the orbit with the point in the upper border of the bony auditory meatus directly above the middle of the opening. It will be found that by this rule the face is thrown a little higher than by the simpler one, which is tolerably accurate, of making the upper border of the zigoma horizontal.

Dr. Paul Ricardi [2] has published a work in Italian on growth and stature, founded chiefly on observations made on the inhabitants of Modena and of the neighborhood. He finds that at birth there is little difference between the height and the breadth through the extended arms. Up to seven or eight years the latter measurement is almost always the less, but subsequently it is the greater. In the adult man, the height being 1000, the spread is 1045, and in woman 1015. On referring to Roberts' Anthropometry we find that he gives precisely the same proportions. According to Ricardi the maximum excess of the height over the spread is ten centimetres, while the maximum excess of the spread over the height may be as much as nineteen centimetres.

THE TOPOGRAPHY OF THE FEMALE THORAX.[3]

Professor Henke has written a paper to explain why, in his text-book on topographical anatomy, he has said but little of the difference of the relations of the thoracic organs in man and woman. It is well known that the sternum is absolutely smaller in woman, and it has been stated that the proportion of the manubrium to the body is characteristic of the sex. Hyrtl wrote: "I find the difference between the male and female sternum so clearly expressed by the proportion of the manubrium to the body that it is hardly possible to err in determining the sex. The manubrium of the female sternum exceeds half the length of the body, while the body in the male sternum is at least twice as long as the manubrium." According to Luschka "the body is usually twice as long as the manubrium in woman, and two and one half times as long in man." The writer of this report published [4] a series of measurements according to which the manubrium of the male sternum is to the body as 49 (—) is to 100, and the female as 52 (+) is to 100, thus apparently proving Hyrtl's rule, but the statistics showed that nearly half the cases were exceptions, and that thus the rule was too uncertain to be of value in any given instance. Henke refers to a paper by Strauch (which we have not seen) giving very different results. According to him in man the manubrium is to the body as 37.7 is to 100, and in woman as 71 is to 100. Henke suggests a new method, that of dividing the sternum into two pieces at the third costal cartilage. He finds the two about equal in man, and the lower smaller in woman. If it be true, according to whatever scheme of measurement be adopted, that the lower part of the bone is relatively smaller in woman, it would appear that the relations of the heart must be different in the sexes. Henke finds that there is a characteristic arrangement of the cartilages of the lower true ribs which practically supplies the deficiency of the sternum. We give a translation of his interesting description: "On the other hand, in the female thorax the lower half of the breast bone, without the ensiform cartilage, reckoning from the insertion of the third costal cartilage, is, as has been said, shorter than the upper, and at the same time more slender. The breadth does not increase below as in a well-developed male sternum. The insertions of the lower true ribs are necessarily crowded more together than in the male. There is no space even between the fifth and sixth; on the contrary their cartilages are usually united by a joint further out, which in the male only happens between the sixth and seventh. At the same time the arches of the two sides are so pressed together towards the middle that no place is left between them for the ensiform cartilage, which is consequently driven behind them. Instead of diverging they run here for some distance directly downwards, either close together or at least so near that, with the ensiform cartilage, they form a median continuation of the front wall of the chest, below the breast bone, and then diverge lower down. Even then their divergence is not so strong as in man, but such as to make a very sharp angle. Moreover, these cartilages of the lower true ribs are, relatively, much larger than in man, both longer and thicker, especially that of the seventh, which is most concerned in forming the border of the thorax below the angle. Thus, although their sternal ends reach higher, the points where they join the ribs are lower and nearer the middle line. As a whole they form a strong and steep border of the narrower and higher angle of the abdominal wall. The apex of the angle in which they meet above lies rather lower than the end of the breast bone, and yet about where it would lie in man, that is, twice as far from the top of the sternum as from the insertion of the third rib."

[1] Archiv für Anthropologie, Band xv., 1883.

[2] Further statistics will be found in a review of the book in the Revue d'Anthropologie, deuxième série, tome vii., 1884.

[3] Archiv für Anatomie und Entwickelungsgeschichte, 1883, Heft 4, 5, and 6.

[4] Journal of Anatomy and Physiology, vol. xv., 1881.

From this it is clear that if in the male the lower border of the right ventricle lies across the lower border of the sternum, in the female it must be uncovered by that bone, but Henke points out that if instead of the lower end of the bone we speak of the thoracic angle the relations are practically the same. Professor Henke is, further, of the opinion that female clothing is the cause of this squeezing together of the ribs, although he admits that anatomical subjects for the most part are not of the class addicted to tight lacing. His arguments on this point fail to convince us.

THE FOLD OF THE NATES.[1]

Mr. Symington refers to the general view that the lower border of the gluteus maximus marks the fold of the nates or, according to some, forms it, and points out that Luschka has given a different and more correct account of the matter. Luschka, indeed, shows that the fold of the nates cannot be determined by the edge of the gluteus, which, in fact, crosses it, but that it is beneath a pad of fat, and that bands of connective tissue, passing through the fat, bind the skin to the tuberosity of the ischium and to the fascia lata. We will quote from Mr. Symington's description of the relations of the parts, which is accurate and instructive: "The lower border of the gluteus maximus passes from the coccyx downwards and outwards to about the juncture of the upper with the middle third of the shaft of the femur. As it passes rather more downwards than outwards the border is more internal than inferior. Taking the lower border as straight we found it formed an angle of about 145 degrees with the mesial line of the trunk. The gluteal sulcus, on the other hand, passes outwards and slightly upwards. It is continuous internally with the groove between the inner side of the thigh and the perinæum, and extends outwards below the ischial tuberosity towards the lower part of the great trochanter. It usually reaches about half way across the back of the thigh, and gradually disappears as it passes outwards; occasionally there are one or more transverse folds below it. Close to the middle line the gluteal sulcus will be found, in an average adult, three or four inches below the muscle, but, owing to the lower border of the muscle inclining downwards and outwards, while the gluteal fold extends transversely outwards, the two meet a little external to the middle of the lower border of the muscle, and then the fold passes on to the posterior surface of the muscle. The outer end of the lower border of the muscle reaches two or three inches lower down than the outer end of the gluteal fold." Mr. Symington shows this very prettily by fixing the fold to the deeper parts by pins, and then making a window through the skin both above and below it. He claims, moreover, that the fact can be demonstrated in the living subject. His theory of the production of the fold is essentially Luschka's, but he submits in addition that one factor is the prominence of the tuberosity of the ischium, and another the necessity of a fold in the skin behind the thigh to allow it to be flexed on the abdomen.

THE RELATIONS OF THE FISSURES OF THE BRAIN TO THE SURFACE.[2]

Mr. Hare offers a new method of determining the position of the fissure of Rolando. He has experimented on eleven heads by stretching a string over the vertex attached to pegs driven into the glabella and external occipital protuberance, then removing one side of the calvaria, and marking on the cord the position of the upper end of the fissure. He found that the distance from the glabella to the fissure was 55.7 per cent. of that between the pegs, of course, following the curves. The variations were slight, in no case amounting to one third of an inch, which is the more remarkable and important as the heads were of various shapes and sizes. The angle which the fissure makes with the median line ranged from sixty degrees to seventy-three degrees, averaging sixty-seven degrees. The parieto-occipital fissure was found in ten instances, on an average, five eighths of an inch in front of the lambdoidal suture. Its upper end, according to Mr. Hare, should be sought on the living subject one and seven eighths inches behind the top of the fissure of Rolando. The beginning of the fissure of Sylvius was found very constantly one and one eighth inches behind the external angular process of the frontal bone.

The author studied also the symmetry of the two halves of the brain. The fissure of Rolando was very symmetrical, that of Sylvius was symmetrical at its origin, but not throughout its course. The parieto-occipital fissure was much less regular. [We wonder, by the way, whether any part of the irregularity of the last-named fissure is at all owing to the blunder concerning it — emphasized by a foot-note — which has appeared in the recent editions of Gray's Anatomy.]

MOVEMENTS OF THE SHOULDER.[3]

We would call attention to a paper by Mr. Cathcart, of Edinburgh, on the movements of the shoulder girdle involved in those of the arm on the trunk, not so much by reason of its intrinsic importance, although it is valuable, as because it is a step in the right direction in the study of the actions of muscles. The actions of muscles are often deduced from their anatomical positions, or from the effect of stimulation, or by the study of paralyses, and though in this way we may ascertain tolerably accurately the action of individual muscles, we do not learn how many concur to produce any given movement, nor do we appreciate the relative importance of each. Mr. Cathcart has studied the question on the living model, and, indeed, on many. He pays a handsome compliment to Dr. Keen, of Philadelphia, who it will be remembered read a paper on this subject at the International Congress in London.

Mr. Cathcart points out that according to the usual teaching the action of raising the arm straight outwards as high as possible is divided into two stages: the first till it becomes horizontal, the second afterwards, and that we teach that in the first the humerus moves in the socket till it can move no more, and that in the second stage the shoulder girdle is raised, the scapula rotating at the same time. We omit his remarks on the action of the various muscles, and go on to his account of what actually takes place, which we give in part in his own words: —

"*First Stage.* It will be seen that while the arm is at rest the vertebral border of the scapula projects from the trunk, and that the venter is not closely applied to the chest wall, but that as soon as an effort is made to raise the arm the scapula is drawn more firmly against the ribs by the muscles passing to it

[1] Journal of Anatomy and Physiology, vol. xviii., part 2, January, 1884.

[2] Journal of Anatomy and Physiology, January, 1884.

[3] Journal of Anatomy and Physiology, vol. xviii., January, 1884.

from the trunk. When the arm in leaving the side reaches an angle of about 30°, the inferior angle of the scapula begins to rotate forwards, while the clavicle (best seen at the acromial end) moves upwards and backwards. From the beginning, the contraction of the deltoid and trapezius muscles can be seen and felt, as also that of the infra-spinatus, while that of the serratus magnus is with difficulty appreciated.

"*Second Stage.* The continued rotation of the scapula is at once evident, and on close examination it will be seen, that while the humerus moves with it at first, towards the end of the movement the scapula ceases to rotate, and the last part is performed by the humerus alone moving over the glenoid cavity; this will be rendered apparent if the direction of the spine of the scapula be compared with that of the humerus in the horizontal position and in the vertical above. The acromial end of the clavicle will be seen to rise and pass backwards, also to have a slight rotation on its long axis. The continued contraction of the trapezius, infra-spinatus, and deltoid muscles is apparent, while the increased contraction of the deltoid at its anterior part, and of the lower portion of the serratus magnus, is in each case perfectly clear."

Mr. Cathcart points out that the rotation of the scapula in the early part of the movement may be to some extent passive, that is to say, that it is drawn in part by the muscles passing from it to the humerus. He thinks that the movements of the clavicle lessen the strain needed to keep the body erect by bringing the weight of the arm more into line with the axis of the trunk. He says nothing of the action of the coracobrachialis, which Krause reckons as one of the muscles engaged in the movement when it is carried far, and it certainly seems plausible that it should act towards the end of the second stage.

THE VEINS OF THE PERINÆUM.[1]

Professor Tschaussow, of Warsaw, has made another contribution to the almost endless literature of the deep perineal muscles, which he has studied both by dissections and by microscopic sections. His results strike us as essentially similar to those of Holl, especially if we bear in mind that great regularity is not to be expected in the complicated web of fibres that surround the membranous urethra. Thus, although the work is undoubtedly good, we should hardly have noticed it had it not been for the part relating to the veins of the penis and to the mechanism of erection.

Dr. Tschaussow's experiments lead him to deny the old theory that these muscle serve "*ad refluentem sanguinem retardandum.*" He satisfied himself that the *tendinous* origin of the deep transverse perineal muscle is pierced by several of the *venæ profundæ penis.* He found that the plexus of Santorini has but little connection with the dorsal vein of the penis, depending chiefly on the internal pudic veins; which is quite opposed to Henle's statements. He found further that veins from the bulb of the urethra join the hæmorrhoidal plexus, and that the blood spaces in the corpus spongiosum and the corpora cavernosa communicate by short thin veins running between the latter and opening into the dorsal vein. The study of microscopic sections convinced him that few and small veins pierce the muscular layer, and that the rich plexus around the bulb runs chiefly into the trunk of the internal pudic and into the hæmorrhoidal veins. Thus the contraction of the muscles can have but little effect on the circulation.

The author made injections into the penis with the following results: An injection into the corpus cavernosum did not enter the corpus spongiosum nor the dorsal vein. An injection into the corpus spongiosum filled the dorsal vein very quickly but very little or none entered the corpora cavernosa. An injection into the peripheral end of the dorsal vein, however, filled both the corpora cavernosa and the corpus spongiosum.

The last of these injections demonstrates the communications between the dorsal vein and the other systems. If, therefore, when the corpora cavernosa are injected the vein remains empty it shows, according to Tschaussow, that the distended spaces compress the venous radicles, and this he believes is what occurs in erection. We hope the subject will receive further attention, for, convincing as these arguments appear, we are slow to accept views directly at variance with those of Henle.

[1] Archiv des Anatomie und Entwikelungcsgeschichte, 1883, Heft 4, 5, and 6.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

FEBRUARY 25, 1884. The President, DR. CHARLES D. HOMANS, in the chair.

ANURIA FROM COMPRESSION OF THE URETERS BY CANCEROUS DISEASE.

DR. MINOT showed the specimen, which was taken from a woman fifty-three years old, who entered the Massachusetts General Hospital February 13th, and died February 21st. She was a widow; never had children or miscarriages. For about three years she had occasionally observed slight discharges of blood from the vagina. For the past six months there had been slight leucorrhœa, soreness above the pubes, frequent micturition, and occasional painful defecation. For four weeks there had been great thirst, polyuria, and itching of the arms and of the anus. She had lost much flesh and strength, but had been in bed only nine days. She was anæmic and sallow. Temperature 99.8° F., pulse 120, respiration 26. On the 14th she passed sixteen ounces of urine in twenty-four hours. This was examined by Professor Wood, who reported it as pale, specific gravity 1008½, neutral, a slight trace of albumen, very large excess of bladder and vaginal epithelium, and also clumps and isolated large spindle-shaped and caudate cells, suggestive of morbid growth, a little blood and pus. On the 15th one ounce of urine was drawn by catheter, and from that time, during the remaining six days of her life, the patient passed no urine, except about two drachms with a dejection on the 18th. She vomited everything taken, and her breath had a urinous odor. The vomitus of the 20th, also examined by Professor Wood, was found to contain 6.7 grammes of urea to 912 cc. There was pain in the right flank. She retained consciousness to the last, although drowsy much of the time.

The autopsy, made by Professor Fitz, showed that the enlarged uterus filled the pelvis, and was adherent to the bladder and rectum and to the pelvic walls. The

bladder contained half an ounce of turbid urine. On its posterior wall was an ulceration three quarters of an inch in diameter. The uterine cavity was four inches in depth; the os externum readily admitted the forefinger. The substance of the uterus was transformed into a uniformly opaque, white tissue, from which on pressure sebaceous-like plugs were squeezed. This change extended to the fundus, where there was a round, laminated nodule, easily crushed, but with no sebaceous-like plugs. The left ureter was dilated and tortuous, and obliterated for an inch and a half at the vesical end by means of a soft gray new formation. The left kidney formed a sacculated tumor of the size of the fist, only a thin seam of renal tissue being left. The right ureter was dilated, the vesical opening was of the size of a pin, and the course of the vesical end tortuous. The right kidney was half as large again as the left, its surface grayish-white, the cortex easily detached, increased in thickness, anæmic, not opaque; tubular regions indistinct; pelvis moderately distended. Lymph glands over promontory of sacrum enlarged to the size of an English walnut; on section white, and homogeneous, and numerous sebaceous plugs were squeezed out on pressure.

An interesting feature of the case was the diagnosis of morbid growths by means of the microscopic examination of the urine; also the evidence of the partial elimination of urinary constituents by the lungs, and probably also by the mucous membrane of the stomach. The preservation of consciousness along with urinary suppression is remarkable, but not very unusual. Dr. Minot had before reported to the Society a similar instance. The treatment consisted mainly in the subcutaneous injection of pilocarpine, in the hope of relieving the kidneys through vicarious action of the skin. Dr. Minot showed two microscopic specimens kindly prepared by Dr. H. F. Vickery; one was taken from the enlarged glands in the lumbar region, and the other from the uterine tissue. They showed the characteristic alveolar structure of flat-celled cancer.

DR. GEORGE F. JELLY read a paper on

CASES OF GENERAL PARALYSIS OF THE INSANE.[1]

DR. EDES said that while the diagnosis of general paralysis was, as Dr. Jelly had stated, undoubtedly easy when characteristic mental symptoms accompanied, as in the cases reported, the bodily paralytic manifestations, he wished that Dr. Jelly had spoken more in detail of cases in which the diagnosis was difficult, and especially with reference to the possibility of the disease beginning and continuing for some time without delusions or melancholia.

He referred to the case of a man who had been rather a free liver, and whose general health rather deteriorated until he had a slight attack, characterized by a temporary aphasia and a just perceptible hemiplegia. He became better and worse, and again had a similar attack. His speech was indistinct, and his lips trembled, but there had never been any delusions whatever, and no greater melancholy than might be expected in a man who fully realized the seriousness of his case. He was rather inclined to be emotional, and often seemed ready to weep. His patellar reflex was exceedingly well marked, and there was ankle clonus.

Dr. Edes would like to hear the opinion of Dr. Jelly and Dr. Folsom as to this being a case of general paralysis.

[1] See page 217 of this number of the JOURNAL

DR. JELLY stated that he intended saying in the paper that the diagnosis is easy when we have all the peculiar symptoms named, but that it is sometimes quite difficult. Mental symptoms generally precede those of muscular impairment. Where they do not he would await developments before making a positive diagnosis.

He did not mean that the post-mortem appearances which he described were found in all cases, but he thought those given were the ones most commonly found. There are none that are absolutely pathognomonic, so far as he can learn.

DR. J. O. GREEN read a paper on a case of

INFLAMMATION OF BOTH TYMPANA AND BOTH LABYRINTHS IN SCARLET FEVER.

A girl aged ten years, never very strong, and who a short time before had an ill-defined illness, the diagnosis of which could not be ascertained, was seized fourteen days before with vomiting and other symptoms which developed a scarlet fever. For the first week the disease was not severe, and two brothers at the same time had the fever of a mild type. About the sixth day she was noticed to be deaf, and just before this spoke of very loud noises in the ears. In two or three days the deafness became total; no sound of other voices could be heard, nor her own, and the watch was heard neither on the ear, skull, nor when held between the teeth. At the same time the fever became very severe, and for several days the condition was such as to give much anxiety; there was no active delirium, and but very little complaint of pain in the ears. On the tenth day a discharge began from the left ear, and soon after from the right; this was composed of thin, very abundant clear serum, with a slight admixture of flakes of apparent pus. On the eleventh day the violence of the fever rapidly abated, the appetite returned, but the deafness remained the same. Throughout the disease the mucous membrane of the nose and pharynx was but moderately affected, and the tongue was never of the intense red so often seen.

On the fourteenth day of the fever, the ninth day from the beginning of the deafness, and the fourth or fifth day from the appearance of the discharge from the ears, I saw her in consultation on February 17, 1884.

Desquamation of the hands was just beginning; paresis of the left facial nerve was marked. Both meatuses were slightly excoriated by the discharge; each concha was filled with clear, limpid serum, which was removed with the syringe, as were also several large flakes of epidermis from the meatuses.

The left ear was inspected, but only a red mass of swollen tissue could be seen, without any of the usual landmarks. After thorough drying the serum was secreted so rapidly that but a momentary glimpse could be obtained. In the right ear was a similar mass of red swollen tissue, in the centre of which the manubrium of the hammer could be seen distinctly, and on the posterior wall of the meatus close to the tympanic ring were granulations bleeding to the touch. By Politzer's inflation no impression could be made on the ears. The child was then rapidly etherized in order to thoroughly explore and cleanse the tympana. In the left ear no traces of the membrana tympani or ossicles could be found, and the whole inner wall of the tympanum was distinctly carious. In the right ear the whole membrana tympani was gone, the swollen tissue was

the inflamed tympanic mucous membrane, and the hammer was in its normal position but completely dissected out by the sloughing which had occurred. Both Eustachian tubes were catheterized, and the air passed freely with distinct whistles into the meatuses. The operation lasted scarcely five minutes, and the child came out of the ether rapidly and well with but slight nausea. Thorough douching with warm carbolic solution three times a day and Politzer's inflation once a day were advised.

The case is interesting in several ways: First, from the involvement of both labyrinths as shown by the total deafness, the labyrinthine disease evidently occurring within two or three days of the first ear trouble, and probably being an inflammation secondary to the inflammation of the tympanum and an extension inwards of that inflammation; secondly, from the extensive caries which already existed on the ninth day after the first noticeable deafness.

Two or three other points are worthy of attention: Very loud noises were complained of before the deafness was noticed; in this case no description was given of them, but when loud "clashing," "ringing of small bells," or distinctly "musical notes" are heard during scarlet fever or cerebro-spinal meningitis, they are very apt to be the immediate premonitions of labyrinthine disease, whereas the subjective noises always accompanying acute purulent inflammation of the tympanum are described as "hissing," "singing," "buzzing," or "throbbing." In this case it will also be seen that the development of the ear-disease was accompanied by a great increase in the fever, and, in the absence of other reason, might be regarded as its cause, especially as the first discharge from the ears was followed the next day by a rapid abatement of the fever and of all the dangerous symptoms. The discharge in this case was almost entirely clear, limpid serum and the secretion more rapid than I have ever seen it. The usual serum of tympanic inflammation is wine-yellow; this was nearly as clear as water. In thinking of the case since, I fear that this may be a most serious symptom as indicating destruction of some of the membranes communicating with the labyrinth, and that the liquid is an escape of the labyrinthine peri- and endo-lymph. The few cases in which this has occurred, and of which I have seen one, show that the secreting power of the labyrinth is enormous, considering its size; all of these cases, however, with which I am familiar, were cases of injury, and not of inflammation.

The only means of differentiating labyrinthine fluid from the serum of an inflamed mucous membrane would be a chemical analysis which would show the absence of albumen in the labyrinth water.

The paresis of the left facial was undoubtedly due to the inflammation and caries of the left tympanum which had affected the Fallopian canal.

To a question by Dr. Minot, Dr. Green said that we have severe cases of disease of the ear in which the scarlet fever is light. On the other hand, severity of the disease by depressing the patient tends to enormous sloughs.

— A high official of England has resigned his post for the reason that while he had always hoped to die in office, he finds his failing health forbids. Such health as forbids one's dying is not so bad after all.

THE NEW YORK ACADEMY OF MEDICINE.

THE DIFFERENCES IN FORM OF THE ADULT HEAD.

At a meeting of the Academy held February 21st, Dr. John C. Dalton made an address on the above subject. A short time ago, he said, he had become interested in the method of comparing the differences in the adult human head which was afforded by the machines which hatters were accustomed to use for getting the exact size and shape of the heads of their customers at the level at which the hat was usually worn. He had secured a great variety of paper patterns representing different heads, and had been furnished with no less than 360 of these from one hat shop in New York. According to their shapes the heads were divided into medium, long, and round, heads. One hundred being taken as the standard of width, if the length were between 120 and 130, the head was a medium one; while if the length was under 120, it was a round one; and if over 130, a long one. In addition, the heads varied greatly in regard to the comparative width of the back and front parts and the symmetry of the two sides. Some, again, were perfectly curvilinear, while others presented angles and straight lines at some points.

Dr. Dalton now called special attention to eight of the paper patterns to which he had referred, which he had had hung side by side upon the wall. The first was regular in shape, presenting a curvilinear and comparatively symmetrical oval, which resembled in its general outline the section of an egg. The second presented a squaring of the front part of the head, there being a decided flattening of the temples. In many individuals there was actually a hollowing out of the head at the temples. In the third the square front was still visible, but the occiput was not rounded, as in the other two, but somewhat elongated. Consequently the long head was beginning to appear, instead of the medium, and in this instance the length was 135. In the fourth the extreme of elongation among all the heads whose outlines were taken was reached, namely, 153. In the fifth pattern, however, there was noted a round head, which was tolerably symmetrical, and had the proportion of 108 to 100 in its diameters. In the sixth the length was 117, and here the occiput was seen to be wider and the front part of the head narrower than in the others. Number seven was remarkable as being the most unsymmetrical of all, and in number eight the length was 128, while there was a very broad occiput.

The want of symmetry was one of the most prominent characteristics in almost all of them; although this was not always evident at a first glance. If, however, the pattern were doubled upon itself, the difference between the two sides at once became apparent. When this test was applied to all in turn, number six was found to be the most nearly symmetrical. Want of symmetry, then, was the rule; and the same thing, Dr. Dalton said, was true in regard to the brain. He had never yet met with a head or a brain that was perfectly symmetrical. In addition to other variations, the cerebellum was almost always more or less twisted as regards the axis of the cerebrum. But this was not surprising when it was remembered that no human face was symmetrical. Among other matters of interest connected with this subject was the fact that these diversities in the symmetry of the head were always in one direction. There was almost invariably a decided

preponderance towards one side, which gave the head a certain amount of obliquity. Thus, if the occiput were flattened on one side, the temple would be found to be flattened on the other. In several cases a twist towards the left side was noted, and in nine out of twelve instances in which the head was perceptibly twisted the obliquity was towards the left, while in only three was it towards the right.

This seemed, at all events, to be true of heads in New York, and here there was also a decided preponderance of the long head. Dr. Dalton had found that sixty-four per cent. of the heads studied were medium, or with a long diameter between 120 and 130; ten per cent. round, or with a long diameter under 120; and twenty-six per cent. long, or with a long diameter of over 130. Consequently the long heads outnumbered the round ones in the proportion of two and a half to one. These differences between the two sides of the same head and between different heads were of interest also in connection with the hypothesis which was at the present time pretty generally accepted, that all parts of the brain did not have the same functions. The doctrine of cerebral localization recognized that the gray matter in some parts of the brain performed different nervous actions from that in other parts. There were motor centres and perceptive centres, and it was believed that this difference in function was connected with a difference in structure, the cells of the motor tract, for instance, being different from those of any other part in character and arrangement. From the external examination of a long head it might very naturally be supposed that there was a larger amount of gray matter in the cerebral substance than in a round one, because a long oval presented a surface of greater extent than a short one. This might, indeed, be true if the external surface of the hemispheres were smooth. On the contrary, however, we knew that the cortical layer of brain tissue was not smooth, but convoluted, and in the brain contained within a round cranium the fissures might be deeper and the foldings more numerous and complex than in one belonging to a long head. The shape also varied in other ways, as, for instance, a round head might be much deeper than a long one in a vertical direction, and, therefore, we could not conclude that because a head was round and compact the brain contained less gray matter than in the case of a long one. Still, again, the motor centres in two brains might be precisely the same in structure while the fissures might be deep and narrow in one, and shallow and broad in the other, so that there might be exactly the same amount of gray matter in the two, though their forms were entirely different.

These points were worthy of consideration, he thought, when it was remembered what differences in form might be due purely to external causes. In certain tribes of Indians it was well known that the head was compressed during infancy, and retained the distorted shape thus given it throughout life. Among the Chenook Indians the front part of the head was thus compressed, and among the Natchez the back part, yet as regards function there was no difference whatever between the brains in the two forms of heads.

DR. BARKER said that some fifteen or twenty years ago a great many papers had been written in the obstetrical journals in regard to the influence of parturition in forming the shape of the human head, and in connection with this subject he had instituted a series of inquiries in the lying-in department of Bellevue Hospital. The shape of the head immediately after birth and then again eight days later was noted by the members of the house staff in 132 infants during a service of nine or ten months. Dr. Barker then alluded to the compression, moulding, and change of shape which the head underwent in passing through the pelvis, especially in tedious labors, and said that in the case of left occipito-anterior positions of the vertex there was almost always a pressing out of the head towards the right on account of the space existing in the right oblique diameter of the pelvis, which permitted it to protrude in this direction, while in right occipito-anterior positions the bulging was towards the left. In consequence of this he could almost invariably tell simply by examining the head of a new-born infant, if he saw it within forty-eight hours after birth, whether the head had presented towards the left or the right. This applied only to anterior positions of the vertex, however, since in posterior positions the shape of the head was much changed by the rotation which it had to undergo. At the time referred to the question was discussed a great deal as to whether this compression during labor influenced the shape of the head permanently, and as to whether it affected the functions of the brain in after life. In the observations made at Bellevue Hospital it was found that the disproportion between the two sides of the head had almost always entirely disappeared by the end of the eight days, but in some instances this was more or less prolonged. There was another point to which he should like to call attention. If Dr. Dalton, ten years from now, were to present the outlines of the same heads, the diagram of which he had exhibited this evening, would they be precisely the same as at the present time? For himself he felt pretty sure that the form of the head changed more or less in adult life, and even at quite an advanced age, and this belief was founded on the fact that his hatter had found that his head had varied somewhat in shape from time to time.

DR. J. LEONARD CORNING thought the paper of deep interest. The ideas that pressure upon a certain part of the head did not result in dwarfing and atrophy of the organs beneath, but simply in pressing them into a different location, and that form had not so much to do with the functions of the brain as the amount of surface presented by the gray matter, were certainly well worthy of consideration. As to the question of asymmetry, this was a point which had of late often been brought up in criminal trials to prove that the brain of the prisoner was not well balanced, especially in the case of Guiteau. Arguments to this effect based on the asymmetry of the head he believed were not supported by facts, and the investigations of Dr. Dalton showed that notwithstanding such extreme distortion as was caused by the custom in vogue among the Indians referred to the organs were preserved intact.

After a few remarks by Dr. David Webster, DR. DALTON said that the idea of changes occurring in the adult head was entirely a new one to him, but as it was a well-known fact that other parts of the body changed very materially as life advanced, he did not see why this might not be the case with the head also. The twist of which Dr. Barker had spoken as occurring during labor no doubt disappeared, as a rule, shortly after birth; but in a few instances this obliquity probably remained permanently. As the result of his in-

vestigations he would say that we could not conclude from the existence of asymmetry in the cranium that there was a corresponding want of symmetry in the brain itself.

DR. P. ALBERT MORROW then read a paper on

AN IMPROVED METHOD IN THE TREATMENT OF CERTAIN FORMS OF SKIN AFFECTIONS.

The method referred to was the application of various medicinal substances by means of fixed, adhesive dressings, such as collodion, gelatine, and gutta percha, which has received so much attention from dermatologists during the last one or two years, and the paper was discussed by DRS. BRONSON, J. C. JACKSON, and SHERWELL.

FIRST AID TO THE INJURED.

Before adjournment DR. W. M. CARPENTER presented a resolution, which was adopted, giving the indorsement of the Academy to the Society for Instruction in First Aid to the Injured, which has been in existence for two years in New York, and which now proposes to extend its work to other parts of the country.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

AT a stated meeting of the Society held February 25th DR. WILLIAM S. HALSTED read a paper entitled

THE EFFECTS OF ADDUCTION AND ABDUCTION ON THE LENGTH OF THE LIMB IN FRACTURES OF THE NECK OF THE FEMUR,

in which he contended that adduction or abduction always formed an important element in the length of the limb in these fractures, and that all statistics of measurements in which they were not taken into consideration were worthless.

The paper was discussed by DRS. A. B. JUDSON and JOHN A. WYETH, both of whom believed it was impossible to secure such exactness of measurement as the writer aimed at, and that the matter was not of as much practical importance as he claimed.

DR. E. C. SPITZKA then read a paper entitled

PATHS OF COÖRDINATION,

based on a case of pure unilateral ataxia without paralysis, which had been under his observation for several years, and in which there was found at the autopsy a secondary degeneration of the stratum intermedium, commencing about the lower third of the pons Varolii, just to the right of the median line, and crossing below the pyramids to the left side, where it extended for some distance down the cord. The symptoms and lesions were described with great minuteness, and the writer believed that the case threw a great deal of light on the tract concerned in the transmission of coördinating power.

The paper was discussed by DR. E. C. SEGUIN, who thought that the results of physiological experiment were somewhat at variance with the conclusions of Dr. Spitzka.

COLLECTIVE INVESTIGATIONS.

DR. DAVID WEBSTER, chairman of the Committee on the President's Address, reported that the committee had decided to recommend the carrying out of the President's suggestion in regard to collective investigations. They believed, however, that all abstruse subjects should be avoided, and only those considered which were of interest to every member of the profession. Intestinal obstruction was proposed as the first topic, and they recommended that to each member of the Society a printed slip should be sent by the secretary, requesting him to send in replies to the following questions, and to be present at the meeting of March 26th, when the subject would be publicly discussed: (1.) How many cases of intestinal obstruction have you treated, and what peculiar symptoms were manifested in each case? (2.) Have you ever performed an operation for the relief of intestinal obstruction due to peritoneal adhesions, and if so, what was the result in each case? (3.) Have you treated any cases of intestinal obstruction, partial or complete, where the so-called pathognomonic symptoms, such as stercoraceous vomiting and obstinate constipation, were absent? The recommendation of the committee was adopted.

THE REPORT OF THE DELEGATES TO THE STATE MEDICAL SOCIETY

was made by their secretary, DR. DANA, who announced that three of the delegates had been elected permanent members of the State Society, namely, Drs. Lockrow, Gibney, and Lewis.

DR. A. JACOBI, from the Committee on Hygiene, moved that the Society should give its official indorsement to

THE CHILDREN'S FACTORY BILL,

now pending in the Legislature. Adopted.

LICENTIATES IN MIDWIFERY.

DR. P. C. COLE read the drafts of two bills which were to be brought before the Legislature, and moved that a resolution be passed to the effect that the Society approved of their general intent and object. The first was to incorporate the New York Maternity and School of Midwifery, for the instruction of women in midwifery and the giving of general clinical instruction in this department of medicine. The second was for the purpose of regulating the practice of midwifery in the State of New York. It provided that no person should practice midwifery unless a duly qualified practitioner of medicine or else a licentiate in midwifery. Licentiates in midwifery were required to receive at least six months' instruction and pass a satisfactory examination; though licenses could be granted also to such practicing midwives as should obtain a certificate from the Board of Managers of the New York Maternity and School of Midwifery. The penalty for infringement of this act, which was to be classed as a misdemeanor, was a fine not to exceed $1000. After some discussion, the whole matter was referred to a special committee of five, who were requested to report at the next meeting of the Society.

— A correspondent writes: "One man may steal a horse, while another may not look over a hedge; for example, the city may put heaps of unmixed salt over the numerous air or water covers in the streets (thereby causing holes in the ice, which endanger the lives and limbs of horses and their drivers, in addition to the other effects of salt), while a railway company may not put sand containing a fraction only of salt on their tracks without lawsuits and fines. Here 's official consistency for you!"

Recent Literature.

Voice, Song and Speech. A Practical Guide for Singers and Speakers from the Combined View of Vocal Surgeon and Voice Trainer. By LENNOX BROWNE, F. R. C. P., Ed., and EMIL BEHNKE. With numerous Illustrations by Wood Engraving and Photography. 323 pages. New York: G. P. Putnam's Sons. 1884.

There are few subjects which offer so many conflicting opinions as the questions relating to voice production. The volume before us, besides containing some original matter in regard to the formation of the registers of the voice, presents the views of one school, — in our judgment the correct one, — and is the joint work of a vocal surgeon and a vocal trainer, whose experience had convinced them "that wrong production of voice or abuse of its functions was the chief cause of most of the cases of vocal failure and even of throat disease," and "that the scarcity of fine voices generally acknowledged to exist was due less to dearth of material than to faults in its cultivation and exercise." The two chief faults are (1) attempting to use the voice with an insufficient amount of air or with imperfect control over the respiration, and (2) an undue forcing of the registers. How to avoid and correct these faults is explained in the chapters on the Hygienic Aspect of the Vocal Apparatus and on Voice Cultivation. These chapters consider in detail all the points bearing upon the care and preservation of the voice, and express the views generally held at present of the true methods for good voice production.

A voice register is defined as "a series of tones produced by the same mechanism," and the five registers into which the authors divide the human voice as a whole they claim are each produced by a distinct muscular mechanism.

The photographs of the larynx taken in the act of singing represent the glottic chink and the position of the vocal bands as they must always exist in the production of the respectively produced vocal tones. It is this portion of the book which relates to the photography of the larynx and soft palate which is of most interest to medical readers. The difficulties of photographing an object in such constant motion and so hidden from view as the larynx have at last been overcome, and the results contained in this volume are the most satisfactory of any yet obtained. One of the points brought out was the difference between the appearance of the arytenoid cartilages as seen in the photograph and that of the conventional image we are accustomed to see in books. This consisted in double outlines in the photograph, which were first considered to be a blemish, but was afterward determined to be due to the perspective view of the interior surfaces of the arytenoid cartilages.

Two photographs taken in the act of singing show the positions which the vocal bands assume in the upper thick and falsetto registers. In the "upper thick" they are approximated and everything is contracted, while in the falsetto the rima glottidis is open and all parts are loose and lax. The appearances in the other registers of the voice are represented by engravings. On ascending the scale and coming to the "thin" register there is nothing in the position of the vocal bands to distinguish the "thick" from the "thin" register. But by illuminating the larynx through the throat with a powerful light, as was done by Czermak, and then examining with the laryngoscope, it would seem that the vocal bands are in the "thin" quite transparent, while in the "thick" register they are opaque and bulky, "a difference brought about probably by a contraction of the vertical bundles of the thyro-arytenoideus externus." For the production of tones in the "small" register — the highest part of the soprano voice — the mechanism "consists in the formation of an oval orifice in the front part of the glottis which contracts the more the higher the voice ascends, the vocal ligaments being, in the hinder part, pressed together so tightly that scarcely any trace of a slit remains. No vibrations are here noticeable, while they are, on the contrary, so very marked in the anterior portion as sometimes to blur the outlines of the orifice to a considerable extent." The authors claim to have seen these appearances repeatedly in women as well as in boys. We regret that a photograph of this condition of things was not produced instead of the well-finished engraving which accompanies the text. Interesting and suggestive as are the authors' remarks in regard to the different ways the vocal bands arrange themselves to produce the different tones, we doubt if they will be accepted until verified by a large number of observations upon different individuals.

The series of photographs of the soft palate show the positions it assumes in the production of tones differing in pitch and quality. It rises with the ascending scale, and the quality of the voice depends upon the degree of tightness with which it closes against the posterior pharyngeal wall. In singing a high note with a pure quality the uvula contracts, the arch between the pillars of the fauces becomes higher and narrower, and the closure of the palate with the back of the pharynx is complete, while on producing the same note with a nasal quality the soft palate is relaxed, thereby allowing the passage of air through the nares, upon which the peculiar quality depends.

We agree with the authors in believing that their results should effectually silence objections to amputating the uvula or removing the tonsils when they interfere with the free action of the soft palate, which, as these photographs clearly demonstrate, is so important for good voice formation.

The book is written in a popular style, and is intended to be a complete manual for singers and speakers. As such we can recommend it as a safe and valuable guide.

A System of Human Anatomy, including its Medical and Surgical Relations. By HARRISON ALLEN, M. D. Section V. Nervous System. Philadelphia: Henry C. Lea's Son & Co. 1883.

This volume confirms the high opinion we have already expressed of this work, and, moreover, strengthens our conviction that it is suited to the wants of the graduate rather than of the student of medicine. The anatomy of the brain is a most difficult matter to present, and we think that the distinguished author has been very successful, always with the reservation implied above, that the reader should be prepared by previous knowledge. It seems to us that the important subject of cerebral localizations in the cortex is rather lightly touched upon. We find nothing whatever of the relations of the convolutions to the skull, a very important chapter, which we hope will have a place in

the final section of the work. The arachnoid is well described as separating the subdural and the subarachnoid lymph-spaces. The treatment of the peripheral nerves is very satisfactory. We are glad to find that the author recognizes twelve cranial pairs. The remarks on each nerve are very interesting, and contain much that is of practical value. Indeed, they constitute one of the charms of the book. The illustrations are good, but we own we should like to see a number of diagrams, which would help greatly in elucidating the anatomy of the brain. The volume offers throughout new instances of the learning and care of the author.

T. D.

Medical and Surgical Journal.

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THE RELATION OF LABORATORIES TO MEDICAL SCIENCE AND MEDICAL EDUCATION.

THE recent opening of the new biological laboratory of the Johns Hopkins University and the address then delivered by Professor Martin, in which he traces the rise and development of the laboratory as a revolution in and an aid to study within the past sixty years, and delineates somewhat the just expectations from the expansion of laboratory work in the future, offer an occasion which we must not neglect, to say a few words as to the relation of laboratories to medical science and medical education, especially as in a previous editorial we dwelt particularly upon the necessity of preserving the relative importance of clinical study pursued largely by laboratory methods, by methods yielding first-hand and not second-hand knowledge.

If our age in the world's history deserve any adjective at all it surely deserves the adjective progressive, and as we are in this age we also must be progressive, for the part may not rebel against the quality of the whole. Assuredly medicine has progressed, but to be with the time it must continue to advance higher and further. Now our advance as a profession depends very largely upon the teaching we get while students, for it is a matter of current observation that the active practitioner gradually falls behind as he grows older, his point of view is supplanted by a newer and better one, and he retains his preëminence only on the score of experience, which gives to his opinions a value which nothing else can insure. The practitioner may begin fully abreast with the knowledge of his time, freshly imparted to him by specialists, but he cannot remain abreast and practice too, and it is this which makes it a vital necessity to educate medical students to the highest medical level possible, for they will not rise with the elevation of medical science, save in rare exceptional cases. We must be honest about this, and conform our plans to the inevitable.

Let us admit, then, the antagonism between active practice and thorough acquaintance with the progress of medicine, and from this admission let us deduce the duty of educating medical students to the highest limit possible; it then still remains for us to decide how we may best fulfill our acknowledged duty. Now medicine is a scientific study, and in the methods of scientific teaching a vast improvement has taken place chiefly within the last quarter of a century. It has been recognized that the sciences deal with the things and occurrences by which we are surrounded, that a description of these facts by another does not constitute real knowledge, but that we know and can know only at first hand. The student must be brought face to face with the phenomena he is to study, he must have a personal acquaintance with the means by which a scientific law is demonstrated, and accordingly laboratories have been established for the instruction of students, at least in all the natural sciences. In these laboratories the student may make acquaintance with the facts and phenomena of nature. What is true of science at large holds also true of medical science; the chief improvement made in our time has been to secure to the student more direct and immediate contact with the facts of medicine; he works more in the dissecting room and physiological laboratory, and should also spend more time at the bedside of the sick. All our readers will doubtless acknowledge the value, or more than value, the imperative necessity of the most thorough and extended clinical instruction possible, and, as before said, we have recently had occasion to insist upon the importance of clinical teaching to the medical student. The clinics, with small classes, give of diseases that first-hand knowledge which laboratories afford of other departments; and, indeed, from this point of view the distinction commonly made in medical schools between laboratory and clinical instruction cannot be justified, where the term clinical is properly applied, however natural it appears as a matter of convenience. Nevertheless, for our present purpose, we accept the distinction, and wish to say a few words concerning the medical laboratories in the restricted sense.

The modern laboratory is a new thing, the invaluable culmination of that immense intellectual revolution which has nearly freed us from the thraldom of dead authority. Indeed, the progress of scientific education may be approximately measured by the number and character of the laboratories at its disposal. There is no more hopeful indication of the gradual elevation of our medical schools than is given by the improvement and multiplication of their laboratories. For a long time the anthropotomic laboratory, as Dr. Holmes with characteristic aptness has named the dissecting room, existed alone; all the other departments relied solely upon didactic instruction. Only in anatomy

did the students get that direct practical training which was lacking in the other so-called scientific branches of medicine. At present new laboratories are organized from time to time, and especially for chemistry and physiology have many been recently formed. But even the best of our schools are still distant from the goal which must be attained before they can fully respond to the demands of thorough education, because each of the medical sciences needs its own laboratory, and until they are all provided for the goal will remain beyond reach. Anatomy may be granted the first claim, but the other claimants press quickly after it; physiology, chemistry, histology and embryology, pathology, experimental pharmacology, and hygiene, not one of them can do its best without its own large and expensive laboratory. We trust that it cannot be many years before every good medical school in the country will possess laboratories at least for physiology, pathology, and hygiene. For our own part we believe that hygiene is most unfortunately neglected in this country, and that no other addition to the current curriculums of our medical schools is so urgently needed as that of hygiene.

Our medical schools ought, however, to do something more than turn out so many diplomaed students per annum. Those, to be sure, that are carried on as commercial speculations for the financial benefit of the members of the Faculty, cannot be expected to sacrifice their profits to ideal aims, but the endowed schools ought to contribute to the promotion of medical knowledge, and offer ample facilities and hearty encouragement to investigators. In organizing their laboratories these latter schools should bear this higher duty in mind. The improvement of medical practice depends more largely than is perhaps commonly believed upon purely scientific researches, and it is indispensable to wise forethought to have in mind the duty of offering to those young men, who have the inclination and capacity, the opportunity to become investigators after a course of thorough training. This higher duty may be the more readily fulfilled because experience has amply demonstrated that instruction and investigation may be successfully and economically combined in one laboratory.

A good scientific laboratory, properly equipped for its double functions, is a far greater, more difficult, elaborate, and costly enterprise than is generally conceived. The fittings are necessarily numerous, varied, and expensive, even in those departments which need the very least; considerable space is required for the storage of the apparatus, and plenty of space and light for work, — we never heard of a laboratory that had too much room! The character and value of the laboratory will, however, be determined more by its officers than by all else, a fact amply exemplified by the first inspirations and the earlier work of the generation of physicists and biologists now passing off the stage. Perhaps we cannot better express what the officers should be and do than by the following extract from a recent editorial of *Science* upon laboratories: —

"The highest officer must be the responsible director, — a man of superior ability, extensive attainments, and prolonged experience; one, in short, who has mastered his department of science, knows its possibilities and deficiencies, and is, therefore, capable of judging what work is most feasible and instructive for students, and what problems are best adapted for investigation. It is sheer waste for a man of such high capacity to sacrifice his whole time to the arrangement of apparatus or the preparation of experiments for his lectures or his students; therefore it is desirable, we prefer to say indispensable, that he should have an assistant, preferably a young devotee of science, who will be fitted by his experience as an assistant to ultimately become himself director of a similar laboratory. The third person is the laboratory keeper (*diener*), who needs must be a man of some mechanical skill, so that the precious instruments may be safely intrusted to his care. He should be something more than a servant, and less than an assistant. A laboratory without this working force cannot do much for the promotion of science, although even more modest ones may be valuable for simple instruction. A first-class laboratory, and in Germany are many such, has always a larger number of officers. There are few persons among us who appreciate the magnitude of a scientific laboratory; were it otherwise there would not be so many petty substitutes for them."

A laboratory conformed to the high standard set must spend much money; therein lies the difficulty which prevents the immediate establishment of such, for our medical schools are not at all or insufficiently endowed, and have not the means wherewith to create the laboratories, however eagerly they may desire them. If there be any one who wishes to confer a great benefaction upon medicine and mankind by an endowment we should be very glad to see such a gift made for the support of a first-class laboratory at one of the accredited schools already existing.

Medicine, which is exclusively devoted to human welfare, has received in return but little from the generous in comparison with the liberal amounts bestowed for other purposes. The best form of gift would be without restrictions, but if the donor prefers to designate a special object his wisest choice, in our belief, would be, if the sum is *very large*, to found a hospital under the control of a first-rate school, or, if the sum is smaller, to endow a laboratory of physiology, hygiene, pathology, or histology, or such branch as he may elect, a biological institute being thus ultimately evolved.

PERIODICAL CHANGE OF COLOR OF THE HAIR.

A curious and apparently unique case of periodical change in the color of the hair is described by Dr. C. Reinhard in the last number of *Virchow's Archiv*. The subject exhibiting this interesting phenomenon was a female epileptic idiot, thirteen years of age, who was under careful observation at the Dalldorf-Berlin Asylum for two years. Very shortly after the reception of this girl at the asylum it was noticed

that her hair, which was soft and thick, changed its color from time to time from a light yellow to a deep red, and back again. The process, beginning at the end of the hairs, was accomplished pretty rapidly — in two or three days, and each change remained seven or eight days. It was noticed that the changes of color were, in a general way, synchronous with the periodical changes in the psychical condition attendant upon the epileptic attacks, the dark color being assumed during the time of excitement and the lighter color during the succeeding period of stupor. These changes occurred in the same hairs, not being dependent upon the growth of new hair. There was no disease of the hair, nor of the scalp other than a slight dryness during the periods of stupor.

The writer, as the result of a careful consideration of this case from different points of view, supported by a thorough microscopical examination of the hair at various periods, and of the skin after death, advances as the most probable explanation of the phenomena described the occurrence of considerable and rapid changes in the amount of air contained in the hair shaft. The light color resulting from the presence of a larger quantity of air veiling the pigment, the darker color returning with the departure of the air. To these results the greater dryness and roughness of the hair, although slight, at certain times probably contributed in some degree by altering the refraction of the light, the drier the hair the lighter the color.

The presence of an abnormal quantity of air in the hair is the explanation offered for those cases in which a permanent and sudden change from dark to gray or white hair is reported, and notwithstanding Hebra's and Kaposi's dissent the occurrence of such is well established by Charcot, Bichat, Lélois, Raymond, and other trustworthy authorities, the last of these recording a case in which, apparently in consequence of severe neuralgia of the head, a patient's hair turned, in five hours, from black to white, passing through an intermediate stage of red. Landois describes one of these cases in *Virchow's Archiv*, April, 1866, and Wilson credits these sudden changes as authenticated. In these cases of permanent change some other influence than the mere increase of air must come into play, and it is probable that trophic nerve changes contribute to the result in the cases of sudden and permanent change, as also in the singular case of our author, the changes in the first class of cases being carried to an irreparable point.

The air may penetrate the hair shaft from the atmosphere or may have its origin from the gases present in the blood, and probably may be drawn from both sources. However acceptable these hypotheses may prove to account for the facts recorded, and in regard to which it would seem that there can be no question, the facts themselves may be fairly used to emphasize the following conclusions: (1) Trophic disturbances in the domain of the nerves supplying the scalp may accompany other cerebral phenomena; (2) these trophic disturbances may extend even to the hair; (3) such disturbances may, like many other nervous processes, assume a periodical character; (4) the attendant changes in the hair manifest themselves by a loss of color; (5) the same phenomenon also probably depends upon an abnormal storing up of air, and, as this case shows, may be transitory.

NEW NATIONAL PHARMACOPŒIA.

THE bill providing for the preparation of a new pharmacopœia, to which we referred in a late issue, attracts no little attention, and the comments are by no means favorable to the introduction of a new standard. The *Medical News*, of Philadelphia, returns to the charge, however, in a manner which does it little credit. It opens its last editorial on the subject as follows: "The proposition for a national pharmacopœia appears to meet with general professional commendation, and the only unfavorable criticism which we have seen is based on trivial grounds or on erroneous views of the power of Congress in the premises." As the only favorable comments are found in the *News* itself and the *Journal of the American Medical Association*, we fear that the *News* does not take great pains to learn the views of others. Whether the *News* acquaints itself with the views of others or is satisfied with its own is a matter of slight importance, but both the manner and the matter of its plea for the bill are noticeable. The editorial mentioned closes as follows: "The authority granted to that body (Congress) does not extend to fixing a standard of drugs and preparations which shall be imperative on the medical and pharmaceutical professions. It can, however, provide a standard for its own departments, and this is all that Mr. Randall's bill proposes to do. If, as is to be expected, that standard should prove free from the imperfections of the existing Pharmacopœia, the latter would be naturally superseded; but, in any case, it would be for the professions to determine which of the two should be recognized."

That is exactly the reason for the strongest opposition: Congress cannot fix a standard which is imperative on the profession, and as to the departments, we showed in a recent editorial that the existing Pharmacopœia had been already adopted by the Treasury Department, and by several States as a legal standard. Further action of this sort is easy, but in the choice between the professional and the proposed Congressional Pharmacopœias confusion must inevitably result.

The *American Druggist* makes the following contribution to history: —

"It is rather remarkable ... that, when Dr. E. R. Squibb proposed, a few years since, to change the method of organizing the Convention so as to place the revision of the work, practically, under the auspices provided for in the above act (Randall's bill), the leading opponents of the plan were Philadelphians, and that their principal effort was to show that the plan already in operation is the one to be preferred. The Convention of 1880 was called, and the subsequent revision was conducted accordingly; but the

Convention adopted measures which reformed the methods of revision and removed the control of the work from Philadelphia. It becomes, therefore, of interest to inquire whether the 'change of base' manifested in the 'City of Brotherly Love' can have any relation to the acts of the Convention of 1880."

MEDICAL NOTES.

— M. Perier, at l'Hôpital St. Antoine, has used for some years with good effect (*Journal de Médicine*, January, 1884) an aqueous solution of chloral, 1–100, for wounds involving the buccal cavity. The sedative action of the drug is added to its antiseptic effect. It should be employed after every ingestion of food, even of milk or bouillon, for the residue of such substances, undergoing fermentation, has an unfavorable action on the raw wound. In cases of fistulous tracts following necrosis the use of this solution by means of the irrigator is found to relieve all fetor, thereby increasing the appetite, and to have a prompt action on the pain and inflammation. Details are given of a gun-shot wound carrying away the whole of one cheek which healed very kindly under the chloral irrigations.

— Dr. Samuel Wilks, senior physician to Guy's Hospital, writes to the *Medical Times and Gazette* (February 9th) commending a recent paper by Dr. Matthews Duncan on Vicarious Menstruation and Amenorrhœa, and protesting against the belief in vicarious menstruation as an "old-wives' fable." He has never seen a case, and considers that the references to the subject in the text-books are a mere repetition of groundless traditions. He also declares against the use of the term amenorrhœa as referring to a substantive complaint. "For my own part," says he, "I know nothing of such a disorder, nor of such remedies as emmenagogues. I believe myself that amenorrhœa, like many other complaints, is the remnant of a popular delusion, and if so it should be eradicated, like the other disorder, from the medical minds.

— The London Society of Compositors has called the attention of the trade to the excessive mortality prevailing among the members of their craft. In the quarterly journal of the Union, *The Printer*, statistics are given concerning funeral allowances, which for the year amounted to seventy-four. Out of this number twenty-two compositors died from phthisis, and thirteen from bronchitis, etc., thus giving a total of thirty-five deaths out of seventy-four due to diseases of the respiratory organs. The causes to which this mortality is ascribed are the irregularity of the hours of work, and especially the lack of ventilation in the composing rooms. These things, however, do not seem sufficiently peculiar to the printer's trade to account for such a large mortality, nor do we know that as a class these workmen are personally especially careless. The limited figures given are not enough to base a general conclusion upon, and perhaps observation among American compositors would not show any worse results than among other in-door workers.

NEW YORK.

— The official report of the annual collection and distribution by the Hospital Saturday and Sunday Association for 1883 has just been published. The sum total of the collection was $42,803.69, against $30,681.52 the year previous, showing an increase of over $12,000. Of this, $27,040.50 was contributed by the churches and synagogues, and of this latter sum the Protestant Episcopal Church alone contributed $12,962. The Presbyterians came next, with $6,715.50, an amount just double that contributed by them in 1882. The Jewish synagogues gave $1,693.99, and the only other denominations giving over $1000 were the Reformed (Dutch) and Methodists. Sixty-nine Protestant Episcopal Churches contributed, against forty-nine in 1882; thirty-five Presbyterian, against seven in 1882; and thirty-seven Methodist, against seven in 1882. Ten thousand seven hundred and thirty-five dollars and sixty-eight cents was designated to particular institutions through churches and other sources, and the remaining sum (less about $3000 for expenses) was distributed to nineteen hospitals. Of these, the Mount Sinai Hospital gets the largest amount, $4,580.57, as affording the greatest number of days of hospital care for free patients for the year. The German Hospital receives $3,628.23, St. Luke's $3,323.14, the Presbyterian $2,321.82, and the Hospital for the Relief of Ruptured and Crippled $3,718.47.

CHICAGO.

— The graduating exercises of the forty-first annual course of lectures of Rush College were held at Central Music Hall on the 19th ult. One hundred and sixty-seven gentlemen received the degree of Doctor of Medicine. On Dr. A. L. Justice the honorary degree was conferred. Dr. Justice lives at El Paso, Texas, and is well and favorably known in the Western States, he having practiced for a considerable time at Denver, Col. Prof. Norman Bridge delivered the doctorate address at the commencement exercises. The alumni of the college, to the number of about four hundred, were entertained in the evening at a banquet given by the Faculty at the Grand Pacific Hotel.

— At the annual meeting of the Alumni Association of Rush College, held on the same day, Dr. William Fox, of Milwaukee, was elected president for the ensuing year. The Committee on Prize Essays reported that no essay had been received which in their judgment was worthy of either the first prize of $400 or the second of $50. They recommended, however, the essay entitled Inhibitory Forces for honorable mention. The Association voted to offer, instead of the two prizes heretofore offered, one of $500 for the best essay embodying original investigation, by an alumnus of the college; essays to be presented to the committee by or before February 1, 1886.

— The medical staff of the Charitable Eye and Ear

Infirmary have established a school of ophthalmology and otology for practitioners. Its courses of instruction will be four weeks in length, thus corresponding to the practitioners' courses at the colleges. The clinical facilities of the infirmary are unexcelled. More than a hundred out-patients come to the dispensary for treatment each day, and there are nearly a hundred resident patients. The fee for the course is twenty dollars.

Correspondence.

LETTER FROM BALTIMORE.

Baltimore, *February* 28, 1884.

Mr. Editor, — As some months have elapsed since a letter from Baltimore has appeared in the Journal, perhaps a brief account of the most important medical events which have occurred in that city during the interval will not be uninteresting to your readers.

The health of the city has, on the whole, been better than that of last year for the same time, and we have had no epidemics, unless a mild type of measles, which has been very prevalent here during the last three or four months, may be called epidemic. The secretary of our city Board of Health says it may not.

Our *four* medical schools (to which number a *fifth* has recently been added) began the session of 1883–1884 with about the usual number of students, and in a few weeks that goodly number of American physicians already dispensing good (or evil) will be increased by some three hundred or more "doctors of medicine."

The *fifth* school, to which reference has been made above, was chartered under the title of The Baltimore Polyclinic and Post-Graduate Medical School. Its *raison d'être* is the fact that the four medical schools previously in existence require for graduation attendance on but two sessions of lectures (of less than six months each in the University of Maryland and the College of Physicians and Surgeons, and less than nine months in the Baltimore Medical College and the College for Women), and none of these schools offer special facilities for post-graduate students. Indeed, the classes of under-graduates at the two schools which are connected with hospitals and large dispensaries are so full, and the time of the students so closely occupied by the didactic lectures, not to mention dissecting and parallel study, that individual clinical observation is well nigh impossible.

The incorporators of the Polyclinic do not intend to confer diplomas, but to supplement the instruction given by the other schools in order to attract to Baltimore some of that large number of physicians, notably from the South, who go for post-graduate advantages to New York or Philadelphia when not deterred by distance from going anywhere. The following are the professors and their departments: Alan P. Smith, surgery; J. Edwin Michael, genito-urinary surgery; B. B. Browne and T. A. Ashby, gynæcology and obstetrics; Samuel Theobald, diseases of the eye and ear; H. Clinton McSherry, diseases of the throat and chest; Robert B. Morison, dermatology and syphilis; Randolph Winslow and John W. Chambers, operative surgery; T. Barton Brune, practice of medicine; William A. Moale, orthopædic surgery; Thomas S. Latimer and Ferdinand E. Cleatard, diseases of children. Diseases of the nervous system and pathology are not yet represented, but are expected to be in a short time. Many of these gentlemen are connected with one or more of the other schools, so that the Polyclinic will not be considered by them "a rival in the field."

During November and the early part of December Dr. Billings delivered, in Hopkins Hall, a very interesting series of lectures on Municipal Hygiene. The lectures were given under the auspices of the Johns Hopkins University, and were intended for the students of the university, physicians, and the general public. In forming his statistics regarding the healthfulness of Baltimore and the expectation of life of its inhabitants, Dr. Billings took as a basis for calculation the United States, and not the city police, census. Of course, therefore, his conclusions are somewhat different from those of the city Board of Health, which latter, as you, Mr. Editor, remember, are based upon the police census, and re-enforced by certain curious and ingenious methods of enumeration. He states that the mean-after-life-time of a white male infant born in Baltimore is but little over thirty-six years, and of a colored male infant only twenty-one years.

In an amusing way he ridiculed the present ward boundaries, which he thought were entirely worthless (except, perhaps, from a political point of view), and showed that they would much impair the value of the ward sanitary statistics.

One of the subjects, to which he devoted nearly the whole of two lectures, and which is particularly interesting to Baltimoreans, was that of sewerage.

We have in Baltimore upwards of 60,000 cess-pools, and our soil is pretty well honeycombed and polluted by them. How to abolish these and establish a first-rate system of sewerage, without undue expense, is the most important sanitary question with which we, at present, have to deal. Dr. Billings, after mentioning the objects and principles of sewerage, spoke in a general way about some particular systems, especially those of Waring, Liernur, and Berlier. Of the latter he said it had but recently been introduced into Paris, and it was too soon to speak of its merits. He spoke approvingly of Colonel Waring's system, and mentioned the advantages which a separate has over a combined system. He also said it was the urgency of the occasion and the cheapness of the Waring system which had occasioned its adoption for Memphis. The Liernur plan he considered had some merits, but it "is a very costly one, both for construction and maintenance, . . . and it is condemned by the leading engineers of England, France, Germany, and America." His opinion has the more weight because it is in accordance with the views expressed by Colonel Waring and City Engineer Latrobe, at the State Sanitary Convention, held in this city the 21st and 23d of last November; and because it is directly opposed to the opinion of Dr. Chancellor, the secretary of our State Board of Health. The latter, some eighteen months ago went to Europe, to investigate sanitary matters, and came back very much impressed with the advantages of Captain Liernur's system of sewerage; so much so, that at the last annual meeting of the State Medical and Chirurgical Faculty he read a paper in which he warmly praised this system, and spoke of it as "destined to supersede all other systems now in vogue." In answer to the views of Dr. Billings and the other above-mentioned gentlemen he has published quite a lengthy article in the *Mary-*

land Medical Journal for December 15th last. This question of the best system of sewerage and the necessity for increasing the powers of the State Board of Health and establishing local boards throughout the State, as well as several other topics of less local interest, were considered at the Sanitary Convention mentioned above. This convention was composed of physicians prominent in the State, engineers, and others interested in sanitary matters. Its proceedings have been published in full in the Fifth Biennial Report of the State Board of Health; and, inasmuch as the practical outcome of the meeting has been the drafting of certain laws to be submitted to the Legislature now in session, it would be better to make them the subject of a future communication than to add an abstract of them to what, I am afraid, is an unduly long letter.

Before concluding, however, allow me to summarize briefly a striking report of ninety-nine lithotomies performed by Dr. Caleb Winslow of this city. This report has been published in full in the *Maryland Medical Journal* for the 23d of this month, but it seems to deserve an even more extended notice.

Of these operations ninety-eight were successful, one unsuccessful; in the latter case the patient, a negro, aged eighteen years, died from dysentery and peritonitis. Of those operated on ninety-eight were males, one a female; seven were adults, ninety-two children; the oldest was seventy years, the youngest three years; ninety-three were whites, six blacks. The number of stones removed was 109, three being the largest number removed from any one person. Stone recurred in but one case, in the patient aged seventy years, and it was successfully removed.

His method of operating was the left lateral. At times a bilateral incision was made to facilitate the removal of large stones. In the female case a stellar incision was made into the urethra, and this was dilated, a large stone being removed. The instruments used by him were curved staff, with gorget eight times, with scalpel ninety-one. Most of the stones were removed entire, a few had to be crushed. One measuring four and a half inches in its shortest, and five and a half in its longest, diameter was removed entire. The weight and dimensions of other calculi are not given.

The larger number of these operations were performed in eastern North Carolina and within a period of eighteen years, and before the development of Bigelow's operation.

Very respectfully, B.

A PLEA FOR CONSISTENCY.

MR. EDITOR, — Can you tell me why it is, now that so many of the great nations are adopting the weights and measures of republican France, that the world continues to be disgraced by a division of time so absurd as that which has come down to us from the dark ages of antiquity? Why should civilized humanity reckon twelve months to each year simply because a lot of Chaldees and Egyptians chose to reckon twelve arbitrary signs to their zodiac? Why split the day into twelve hours and each hour into five times twelve minutes and seconds merely because these same primitive star-gazers saw fit to carry out their whimsical subdivision to this extreme length? Why, finally, should a man worship God just one day out of seven because the ancients happened to be acquainted with only just that number of planets? Yet such is the system under which we all live and die to this hour.

They managed these things so much better in France, in the early days of the first republic, when the philosophers and emancipators had it all their own way, before the "*rois conjurés*" of Europe stepped in and delivered them up again to the tyranny of established usage!

You remember well, Mr. Editor, the history of the republican calendar, that brilliant effort of the human reason to free itself from the trammels of traditional superstition; its *decimal* Sunday, its scientific nomenclature, its commemoration of the heroes and philosophers of every age. Why did it die? Why do we not revive it and place it side by side with its twin sister the metric system as an example and model for future generations? Certainly they are both of a piece, and one is as philosophical and worthy to be adopted as the other. W.

Miscellany.

THE AMERICAN PRACTITIONER ON THE LOUISVILLE MEDICAL COLLEGE.

THE February issue of the *American Practitioner* contains an article by one of its editors, Dr. David W. Yandell, to which those who are interested in maintaining any professional or educational medical standard in this country are particularly referred. The practices there exposed, if truthfully reported, — and we see no reason to doubt it, — make, at this distance, very unpleasant reading, and in Louisville itself can hardly result otherwise than in degrading both the teachers and the students directly concerned in them.

INOCULATION OF TUBERCULOSIS.

AT a recent meeting of the Académie de Médecine, M. Verneuil related the following history: In July, 1877, a house surgeon (interne) at the St. Eugénie Hospital, who performed all the post-mortem examinations, one day noticed a papule at the base of the nail of his third finger. The apex presented a white spot, and a few drops of pus escaped from it. It was frequently cauterized, but the phalanges became attacked, and a cold abscess spread over the back of the hand. After three years' treatment, having failed to produce any improvement, M. Verneuil amputated the finger. The house surgeon was believed to be cured, and practiced in the provinces. Quite recently he has been again attacked by cold abscesses in the lumbar region, causing intense pain; during violent attacks of pain the arms exhibit clonic convulsive movements. M. Verneuil has operated a second time. He is convinced that his patient became inoculated with tuberculosis when performing a necropsy. A similar misfortune happened to Laënnec. One day, when operating on a tuberculous patient, he slightly cut himself with a saw. A swelling appeared on the wounded part. Laënnec cauterized it with antimony-chloride. The swelling disappeared, but twenty years subsequently he died from tuberculosis. — *Paris Corr. Brit. Med. Journal.*

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 23, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Typhoid Fever.
New York	1,340,114	592	209	15.81	19.72	5.95	2.04	.68
Philadelphia	927,995	379	137	15.86	7.54	8.08	3.28	2.86
Brooklyn	644,526	238	90	9.89	18.06	4.30	1.72	.43
Chicago	632,100	201	91	24.01	13.72	8.33	4.41	4.41
Boston	423,800	170	46	9.44	21.24	3.54	1.18	1.77
Baltimore	408,520	176	80	19.25	11.40	2.85	.57	—
St. Louis	400,000	126	42	18.96	15.80	8.69	—	.79
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	140	31	21.42	4.28	1.43	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	92	36	17.44	16.35	2.18	5.45	2.18
Pittsburg	180,000	80	34	8.75	32.50	2.50	2.50	2.50
Milwaukee	142,400	45	26	20.00	11.11	8.88	2.22	8.88
Providence	119,405	38	14	10.52	13.15	5.26	—	2.63
New Haven	62,882	33	16	12.12	3.03	6.06	3.03	—
Nashville	54,400	22	4	—	22.70	—	—	—
Charleston	52,286	34	10	11.76	14.70	—	—	8.82
Lowell	71,447	25	5	16.00	16.00	—	—	—
Worcester	69,442	25	13	24.00	12.00	4.00	—	8.00
Fall River	62,674	24	9	8.32	29.12	8.32	—	—
Cambridge	60,995	21	8	14.28	14.28	9.52	—	—
Lawrence	45,516	22	4	4.54	—	—	—	4.54
Lynn	44,895	8	3	12.50	—	—	—	—
Springfield	38,090	11	6	27.27	—	27.27	—	—
Somerville	31,350	9	2	—	11.11	—	—	—
Holyoke	30,515	10	7	30.00	10.00	—	—	10.00
New Bedford	30,144	6	1	16.66	—	16 66	—	—
Salem	29,503	11	3	—	—	—	—	—
Chelsea	24,347	10	4	10.00	20.00	—	—	—
Taunton	22,693	6	3	—	16.66	—	—	—
Gloucester	21,400	7	0	14.28	28.56	—	—	14.28
Haverhill	20,905	3	0	—	—	—	—	—
Newton	19,421	6	1	16.66	—	—	—	—
Brockton	18,323	3	0	—	—	—	—	—
Malden	15,273	3	1	—	—	—	—	—
Newburyport	13,947	8	2	—	12.50	—	—	—
Fitchburg	13,433	2	1	—	—	—	—	—
Massachusetts towns	316,954	66	16	12.16	—	9.12	—	—

Deaths reported 2652 (no reports from Cincinnati and Buffalo): under five years of age, 1055: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 386, lung diseases 384, consumption 374, diphtheria and croup 145, scarlet fever 50, typhoid fever 47, measles 31, diarrhœal diseases 29, cerebro-spinal meningitis 25, malarial fevers 24, small-pox 20, whooping-cough 12, erysipelas 12, puerperal fever 11. From *measles*, Baltimore 12, New York six, District of Columbia five, New Orleans and Nashville three each, Chicago two. From *diarrhœal diseases*, New York 11, Chicago four, Brooklyn, Baltimore, St. Louis, and New Orleans three each, Lowell and Cambridge one each. From *cerebro-spinal meningitis*, New York five, Philadelphia, Lowell, and Worcester three each, Chicago and St. Louis two each, Boston, Charleston, Lynn, Holyoke, and Newton one each. From *malarial fevers*, New York 12, St. Louis four, Baltimore and New Orleans three each, Brooklyn two. From *small-pox*, New Orleans 17, Philadelphia, Nashville, and Holyoke one each. From *whooping-cough*, New York three, Boston two, Philadelphia, Brooklyn, Chicago, Baltimore, St. Louis, Pittsburg, and Chelsea one each. From *erysipelas*, New York, Chicago, New Orleans, and District of Columbia two each, Brooklyn, Boston, St. Louis, and New Haven one each. From *puerperal fever*, New York and Chicago three each, Philadelphia, Brooklyn, Boston, St. Louis, and Providence one each.

Three cases of small-pox were reported in St. Louis; diphtheria 20, scarlet fever 48, typhoid fever seven, and measles one in Boston; scarlet fever 14 and diphtheria four in Milwaukee.

In — cities and towns of Massachusetts, with an estimated population of 1,411,763 (estimated population of the State 1,955,104), the total death-rate for the week was 16.72 against 16.28 and 19.26 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending February 2d, the death-rate was 20.5. Deaths reported 3448: acute diseases of the respiratory organs (London) 367, whooping-cough 126, scarlet fever 101, measles 75, fevers 38, diphtheria 36, diarrhœa 29, small-pox (Birmingham seven, Liverpool three, Sunderland two, London and Wolverhampton one each) 14. The death-rates ranged from 13.1 in Derby to 28.1 in Oldham; Leicester 14.9; Bradford 18.4; Liverpool 19.2; Blackburn 19.4; Sheffield 20.3; Nottingham 20.6; London 20.7; Manchester 23.9; Newcastle-on-Tyne 24.1; Leeds 24.9. In Edinburgh 22.8; Glasgow 23.6; Dublin 29.7.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending February 9th, the death-rate was 20.6. Deaths reported 3466: acute diseases of the respiratory organs (London) 347, whooping-cough 124, scarlet fever 94, measles 53, fever 44, diarrhœa 35, diphtheria 28, small-pox (Birmingham nine, London four, Liverpool and Sunderland three each, Wolverhampton and Manchester one each) 21. The death-rates ranged from 15.3 in Wolverhampton to 27.9 in Manchester; Blackburn 19.4; London 19.5; Birmingham 19.6; Nottingham 20.3; Leeds 21.4; Sheffield 22.1; Liverpool 23.3; Newcastle-on-Tyne 23.8; Leicester 24; Birkenhead 24.1. In Edinburgh 22.2; Glasgow 26.7; Dublin 30.

For the week ending February 9th, in the Swiss towns, there were 39 deaths from consumption, lung diseases 28, diphtheria and croup 12, diarrhœal diseases 10, whooping-cough three, measles one, small-pox (Winterthin one) one. The death-rates were at Geneva 18.3; Zurich 15.8; Basle 14.7; Berne 27.8.

For the week ending February 2d, in the Swiss towns, there were 32 deaths from lung diseases, consumption 20, diarrhœal diseases 16, whooping-cough seven, diphtheria and croup six, measles, scarlet fever, puerperal fever, and typhoid fever two each, small-pox one. The death-rates were, at Geneva 22.4; Zurich 13.8; Basle 18.6; Berne 24.4.

The meteorological record for the week ending February 23d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Feb., 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 17	30.249	34	39	29	94	96	100	96	S	E	NE	4	6	11	O	R	R	—	—
Mon., 18	29.827	36	40	34	100	89	94	94	N	NE	NE	15	15	10	R	R	O	—	—
Tues., 19	30.208	30	35	26	88	88	100	92	NE	NE	SE	15	20	10	O	O	S	—	—
Wed., 20	29.675	32	54	25	100	80	70	83	SE	NW	NW	21	24	25	R]	O	C	—	—
Thurs., 21	30.155	28	34	17	61	83	90	78	NW	S	SW	15	9	9	O	C	C	—	—
Fri., 22	30.200	29	39	24	73	78	94	81	W	SE	S	10	16	8	C	C	O	—	—
Sat., 23	29.606	32	41	20	100	100	75	92	NW	NW	NW	5	14	28	R	S	C	—	—
Mean, the Week.	29.988	32	54	17				91										63.04	1.99

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OBITUARY.

DR. GEORGE ENGELMANN, the oldest practitioner in St. Louis, and the father of Dr. George J. Engelmann, died of pneumonia on February 4th, in the seventy-sixth year of his age. He was born in Frankfort-on-the-Main in 1809, and came to the United States in 1832, after having received his education at the Berlin, Heidelberg, and Würzburg Universities. He was one of the founders of the Western Academy of Science in 1836, and, later, one of the originators of the St. Louis Medical Society. In 1856 he was largely instrumental in founding the St. Louis Academy of Science, and was for many years president of that body. He had a high reputation as an authority in botany, and for forty-seven years he made it a part of his occupation to take meteorological observations several times a day, and only discontinued this practice two days before his death.

DR. JOHN HUTTON BALFOUR, Emeritus Professor of Medicine and Botany in the University of Edinburgh, Regius Keeper of the Royal Botanic Garden, and Queen's Botanist for Scotland, is dead at the same age, seventy-six. He was a member of many learned societies, both at home and abroad, and was the author of a variety of books and articles on botany, including the Manual of Botany and Botany and Religion.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM FEBRUARY 22, 1884, TO FEBRUARY 29, 1884.

BROWN, JOSEPH B., lieutenant-colonel, and BILLINGS, JOHN S., major, surgeons, directed to attend the International Health Exhibition in London, and, as delegates, the International Medical Congress at Copenhagen, to be held in May and August next, respectively; also to include Berlin in their route to or from Copenhagen, and to be governed by special instructions from the Surgeon-General in complying with this order. S. O. 44, paragraph 8, A. G. O., February 21, 1884.

WOODWARD, JOSEPH J., major and surgeon. Leave of absence still further extended six months on account of sickness. S. O. 44, paragraph 11, A. G. O., February 21, 1884.

HORTON, S. M., major and surgeon. Having reported at these headquarters, from leave of absence, ordered to Fort Hays, Kansas, for duty. S. O. 40, paragraph 2, headquarters, Department of Missouri, Fort Leavenworth, Kansas, February 20, 1884.

PATZKI, JULIUS H., captain and assistant surgeon. Leave of absence extended one year on surgeon's certificate of disability, with permission to go beyond sea. S. O. 43, paragraph 9, A. G. O., February 20, 1884.

MADDOX, T. J. C., first lieutenant and assistant surgeon. Assigned to temporary duty at Meyer's Springs, Texas. Per post orders, No. 27, paragraph 1, Fort Clark, Texas, February 13, 1884.

DIETZ, WILLIAM D., first lieutenant and assistant surgeon. Assigned to temporary duty at U. S. Military Academy, West Point, N. Y.

PHILLIPS, JOHN L., first lieutenant and assistant surgeon. Assigned to temporary duty in Department of the East.

MEAMS, EDGAR A., first lieutenant and assistant surgeon. Assigned to duty in Department of Arizona.

KNEEDLER, WILLIAM L., first lieutenant and assistant surgeon. Assigned to duty in Department of Dakota.

BLACK, CHARLES S., first lieutenant and assistant surgeon. Assigned to duty in Department of Texas.

S. O. 46, paragraph 1, A. G. O., February 25, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MARCH 1, 1884.

WHITAKER, H. W., assistant surgeon, from the Portsmouth, and on sick leave.

GREEN, E. H., passed assistant surgeon, from Museum of Hygiene, and waiting orders.

DEATH. — Died, at Lawrence, Mass., February 10, 1884, Michael Roberts, M. D., M. M. S. S.

SUFFOLK DISTRICT MEDICAL SOCIETY. SPECIAL MEETING. — The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, March 12th, at 7.45 o'clock. The following papers will be presented: Dr. G. Liebmann, Spinal Irritation and Neurasthenia. Drs. S. G. Webber and J. J. Putnam will open the discussion. Dr. T. A. DeBlois, Tonsillitis. Drs. J. W. Farlow and Morton Prince will open the discussion.

ALBERT N. BLODGETT, M. D., *Secretary.*

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting will be held at the Medical Library Rooms, on the second Thursday of March, at four o'clock P. M. Subject: The Discussion of the Best Methods of Wound Treatment. Dr. H. O. Marcy will open the discussion with a brief paper upon Aseptic Surgery. Dr. H. C. White will report a Case of Recto-Vaginal Fistula treated by a New Method. Profession invited.

HENRY M. FIELD, M. D., *Secretary.*

PROVIDENCE MEDICAL ASSOCIATION. ELECTION OF OFFICERS. — The annual meeting of the Providence Medical Association was held in the Medical Library, March 3, 1884, and the following officers elected for the ensuing year: President, Dr. W. J. Burge. Vice-President, Dr. E. T. Caswell. Secretary, Dr. Frank B. Fuller. Treasurer, Dr. Byron Whitford. Standing Committee, Drs. H. G. Miller, G. Radeke, G. D. Hersey, G. A. Pierce, G. W. Porter. Committee on the Reading Room, Drs. G. D. Hersey, H. G. Miller, G. W. Porter.

BOOKS AND PAMPHLETS RECEIVED. — Tribute to the late James Marion Sims, M. D., LL.D. By W. O. Baldwin, M. D., of Montgomery, Ala.

Cooper Medical College, San Francisco. Annual Announcement. Session of 1884.

Original Articles.

MODERN LEGISLATION RELATIVE TO ADULTERATION OF FOOD AND DRUGS.

BY SAMUEL W. ABBOTT, M. D.,
Health Officer of Massachusetts Board of Health, Lunacy, and Charity.

HOWEVER appropriate the customary historical review of a subject may be in an elaborate treatise, I shall devote but a brief portion of this paper to the discussion of the ancient practices relating to food and drug adulteration. The usual history of petty crimes, traced back through centuries to the classic days of Greece and Rome, is repeated in the matter of adulteration. Pliny and Vitruvius and others tell us that opium was adulterated with the juice of other plants, and tests were prescribed for the detection of the fraud. Bread was adulterated with white earth obtained near Naples, and frauds in the making of wine were so common at Athens as to require the appointment of inspectors to prevent and expose the practice.

The disposition of many of the human race to cheat their neighbors has proved to be the mainspring of a continuous and an increasing industry from the earliest times up to the present. Just so long as avarice shall continue to be a ruling passion among men so long will legislation be needed to prevent adulteration, sophistication, and other forms of debasement.

The first English law on record relative to adulteration was enacted in the eleventh century, in the reign of Henry III. By the provisions of this law the pillory and the tumbril [1] were prescribed for the punishment of dishonest bakers, brewers, and others.

Dr. Blyth quotes the following quaint passage from an old paper entitled A Quip for an Upstart Courtier: —

"For you, goodman baker, you that love to be seen in the open market-place, upon the pillory, the world cries out on your wiliness. You buy your corne at the best hand, and yet will not be content to make your bread weight by many ounces. You put in yeaste and salt to make it heavie, and yet all your policie cannot make it. The poor crie out, the rich find fault, and the lord maior, and the sheriffs, like honourable and worshipful maiestrates, every daie walk abroad and weigh your bread and yet all will not serve to make you honest men. But, were extremities used and the Statutes put in the highest degree in practice, you would have as few eares on your head as the collyer."

An ordinance of 1316 prescribed that "no one shall mix any manner of wares, that is to say, shall put old things with new, or new things with old, by reason whereof the good thing may be impaired by the old, nor yet things of one price, or of one sort, with other things of another sort. . . . Also that no man shall moisten any manner of merchandise such as saffron, ginger, alum, cloves, and such manner of things as admit of being moistened."

During the following three centuries groceries and drugs were sold in the same shop, the two trades being combined until 1617, when the apothecaries formed a separate body, and have since remained a distinct trade or occupation.

In France similar laws were in force from early periods relative to bread, wine, and other articles of food. As long ago as 1396 an ordinance was in force in Paris forbidding the coloring of butter with herbs, flowers, or drugs.

The sophistication of drugs was forbidden, and apothecaries also were forbidden to use exhausted drugs under a heavy penalty. Adulterated articles were to be seized and burned in front of the house where they were found.

In Germany likewise for several centuries severe penalties have been inflicted for the sale of adulterated bread, wine, and drugs. For the former a similar penalty was inflicted to that employed in England. The offender was put in a basket at the end of a long pole and plunged in a muddy pool.

MODERN ENGLISH LEGISLATION.

A select parliamentary committee on the adulteration of food was appointed in 1855, and began its labors by a careful investigation of the whole subject, many persons being summoned before the committee who were supposed to possess special information as to the various forms of adulteration which were common at that time. Dr. Hassall, whose careful work had formed a fitting prelude to this inquiry, contributed much valuable information. On the report of the commission the first general Adulteration Act was drafted, and became a law in 1860. By this act it was provided "that every person who shall sell any article of food or drink, with which, to the knowledge of such person, any ingredient, or material injurious to the health of persons eating or drinking such article, has been mixed, and every person who shall sell as pure or unadulterated, any article of food or drink which is adulterated or not pure, shall, for every such offense, on summary conviction of the same, pay a penalty not exceeding £5. with costs." [2]

A second offense was punishable by publishing the offender's name, place of abode, and offense, in addition to the fine.

The analysts under this act were at first appointed by the secretary of state, and afterward by the local government board.

In 1872 the act was remodeled, and other provisions were substituted, especially relating to willful adulteration and criminal intent.

These acts were crude, and during the fourteen years of their operation much dissatisfaction was expressed at the want of standards of common articles of food, at the disagreement of analysts, and at the conflicting decisions of magistrates as to the exact meaning of the term *adulteration* and other legal technicalities.

A new committee was therefore appointed in 1874, witnesses were again examined, greater care being taken to summon merchants, manufacturers, milk dealers, and other persons specially interested in the operation of the act. This committee recommended certain important amendments, and summed up the inquiry by stating that the public was "cheated" rather than "poisoned."

As the result of this inquiry other statutes were enacted in 1875, 1878, and 1879, these constituting the acts now in force in England. As these acts are lengthy the chief points of interest need only be referred to at this time.

The first two sections repeal all previous legislation upon the subject, and define certain terms employed in

[1] Ducking-stool.

[2] Blyth. Foods, their Composition and Analysis, London, 1882.

the act. All offenses under the act are then specified. Ten sections provide for the appointment of analysts, and define their duties. Eight sections prescribe the modes of procedure against offenders. Section 29 provides for the expenses of executing the act. Sections 30 and 31 relate to the special inspection and analysis of tea. Sections 33 and 34 provide for the application of the law in Scotland and Ireland.

The amendment of 1879 provided in addition that it should not be alleged in defense that the purchaser, having bought only for analysis, was not prejudiced by the sale. Other amendments of minor importance were made in the same year.

As a result of these acts there were examined in England, in 1881 and 1882, 32,708 samples specified as follows:[1] —

Year	Milk.		Butter.		Groceries.		Drugs.		Wines, Spirits, and Beer.		Bread and Flour.		Waters.		Sundries.		Totals.	
	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.	No. Analyzed.	No. Adulterated.
1881	6821	1361	1081	137	4328	420	487	93	1967	471	1134	48	1463	383	580	29	17,808	2960
1882	5518	1123	945	144	3626	399	328	55	2151	454	1017	44	689	195	626	44	14,900	2458
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32,708	5418

In France a new impetus has been given to the work of food inspection by the establishment in all the important cities of municipal laboratories and the appointment of inspectors, who, in accordance with the statutes, have power to punish offenders against the laws. Laboratories have been established in Paris, Lyons, Marseilles, Bordeaux, and other large cities. The officials appointed for each are a director, inspectors, and chemists.

Samples are obtained at the markets and shops by the inspectors, in which duty they are assisted by the commissaires de police. They go in pairs to such places as are indicated by dissatisfied purchasers, and, where it is practicable, make cursory examinations at the place of sale. If adulteration is detected two samples are taken, sealed, numbered, and certified by them and also by the tradesman. One is taken to the laboratory, and the other reserved in case of a dispute. Special notice is taken of the condition of the establishment or place of sale as to cleanliness, etc.

The public are invited by notification to take advantage of the statutes, and to request analyses as often as they shall choose to exercise the privilege. Qualitative analyses are made gratuitously, and quantitive analyses are paid for by a fee of five to thirty francs, according to the cost. Statements relative to qualitative analyses are confined to the terms *good*, *passable*, *bad* (not injurious), and *bad* (injurious).

Quantitative analyses must define the exact composition of the article in question.

The laboratory receives two classes of samples, those contributed by the public and those received from the inspectors, while many samples are also analyzed which are obtained from the hospitals, prisons, and other public institutions. From the results of the laboratory work reports are sent to the public prosecutor, who institutes proceedings against offenders.

Much care is given to the work of ascertaining the normal composition of the different articles of food.

The laboratory is amply provided, and has a special photographic department for the purpose of showing clearly to a judge or a jury the palpable proof of adulteration, as in the case of spices, cereals, trichinæ, and other objects requiring ocular demonstration.[2]

The following table[3] shows the work of the laboratory for 1881: —

Total number of samples examined	6517
Percentage of adulteration, total of all samples	50.43
Percentage of adulteration, milk	50.67
Percentage of adulteration, wine	59.17

The samples were also classified as follows: —

Good	1565
Passable	1523
Bad (not injurious)	2608
Bad (injurious)	562
	6258

The remainder (259) were in process of examination at the time of the report.

The samples included, besides wines and milk, spirits, syrups, waters, butter, bread, chocolate, preserves, coffees, confectionery, spices, toys, and various other articles.

The German statutes regulating the sale of food and of drugs are at present not like our own, combined in one statute, but are entirely distinct. The principal law relating to the supervision of the sale of drugs bearing date March, 1872, and the latter, the food law, being enacted May 25, 1879. The drug law of 1872 regulates the sale of medicines, and establishes the German Pharmacopœia as the standard in place of those in use before the union and consolidation of the Empire. The food law regulates the sale of food and drink, dyes, carpets, toys, cooking utensils, and petroleum. Careful attention has been bestowed upon the subject in Germany. In 1878 231,478 samples of different articles were analyzed, and upon the evidence of these analyses 3352 convictions were obtained.

Switzerland also has stringent laws for the prevention of adulteration, especially in the Canton of Zurich.

[1] The Analyst, vols. vi. and vii.
[2] Analyst, vol. vii.
[3] Documents sur les Falsifications des Matieres Alimentaires. Paris. 1882.

Canada has made commendable progress in the same direction, as shown by the reports issued annually since 1876 by the Inland Revenue Department. A summary of the work there accomplished for the six years beginning in 1876 is as follows:[1] —

No. of Analyses.	Genuine.	Adulterated.	Doubtful.	Total.	Per Cent. Adulterated.
1876	87	93	—	180	51.66
1877	241	247	—	488	50.61
1878	523	271	19	813	33.33
1879	619	235	42	896	26.22
1880	728	295	20	1043	28.28
1881	749	260	38	1041	24.97

UNITED STATES.

The thorough investigations of the Parliamentary Committee, and the subsequent legislation in England, were soon followed by similar inquiry in the United States.

Special work had already been accomplished by State Boards of Health, notably those of Massachusetts and Michigan, in the examination of food, during the past ten or fifteen years.

It needs but a passing reference that volumes of sensational and exaggerated statements have been written upon this subject. Column after column of wild assertions as to special articles of food have appeared in the public prints, until the timid consumer is almost driven to starvation as a last resort.

The first movement in the United States toward general legislation for the prevention of this existing evil was initiated by the National Board of Trade in 1879.

DRUG INSPECTION.

It should be said, however, in relation to the department of drug inspection, that valuable work had already been accomplished by the formation of the American Pharmaceutical Association, which for many years exerted a powerful influence in the direction of a pure supply of drugs.

A law had already been enacted by Congress in 1848, providing for special examiners of drugs at important sea-ports. At one port alone (New York) the examiner rejected in nine years 900,000 pounds of adulterated drugs. Political influence interfered very much with the efficiency of this law, and at some ports rendered it inoperative. The amount of adulteration of drugs previous to the enactment of the law referred to was very great. On the authority of Dr. Bailey, the United States drug inspector for the port of New York from 1848 to 1857, nearly one half of the drugs imported were adulterated. Establishments existed in England, Germany, Belgium, and France, where drugs were "prepared with special reference to their sale in the United States." The existence of establishments in this country where adulterations have been systematically practiced has also been demonstrated, especially with reference to powdered drugs.[2]

Reasons for the existence of such practice are by no means wanting. Many dealers enter upon their business with the sole idea of profit. Competition naturally follows until profit is no longer possible. As a further consequence adulteration and the sale of inferior substitutions follow. The manufacturer is sought who sells at the lowest price without regard to quality.

The actual effect of such practice on the health of the people is plainly stated in a recent report to the National Board of Health by Prof. C. L. Diehl, of Louisville, Ky., who says: "One need not be a physician to appreciate the fact that satisfactory medication is impossible when the medicine administered is not that designed by the prescriber. It is not sufficient that the medicine should be '*very nearly*' that which is designed; it should '*absolutely*' correspond to the standard, which the physician has before his mind at the time when he finds it necessary to prescribe it. It is therefore the duty of the dispenser to see to it that the medicines he dispenses conform in every respect to the standard that has been framed for his guidance as well as for the guidance of the physician. The fulfillment of these conditions depends not alone on the integrity of the dispenser, it depends equally on his knowledge and skill; and unless these are combined with integrity the prescriber cannot hope for results which the nature of the disease may justify him to expect. Finding that the medicine has not the expected effect, the prescriber may be led to increase the dose or to replace that originally prescribed by another, without, however, ameliorating the disease or causing it to yield to his treatment. He now perchance begins to suspect that the medicine supplied is not as it should be, and changing his apothecary, soon cures his patient.

"If all cases of bad medication were as simple in their development as the one illustrated there would perhaps be no necessity for this report. Unfortunately, however, such is not the case. It quite often happens that, the diagnosis being well established, it is urgent that the proper medicine should be properly administered. If in a case of this nature the medicine should happen to be of indifferent or inferior quality the life of the patient is placed in jeopardy, and under some circumstances sacrificed. Again, the prescriber, conforming the medication to his diagnosis, may be led to reject that originally made, because he fails to obtain the effect which an abundant experience justifies him to expect from the drug administered. In a case of this kind he may for a time be completely at fault, while the illness of his patient is vexatiously prolonged, or, it may be, aggravated. In short, the use of inferior and adulterated medicines may be the cause of protracted disease, of increased suffering, and in some instances of death; and failing to mitigate and cure diseases in which pure medicine is unequivocally indicated they may lead the physician to errors in diagnosis, cause him to acquire the habit of prescribing large doses of active medicines, and, in fact, seriously affect his success and reputation."

Let me not be understood in this connection as considering drugs to be the *sine qua non* of therapeutics. The physician who uses them to the exclusion of such important remedial measures as heat and cold, light, fresh air, electricity, massage, diet, etc., has hardly learned the alphabet of practice. But if we must use drugs at all, and especially such important remedies as

[1] Inland Revenue Report. Ottawa. 1881.

[2] Prof. S. P. Sharples, Supplement to Fourth Annual Report State Board of Health, Lunacy, and Charity.

[3] Sixth Supplement to National Board of Health Bulletin, 1880, article by Prof. C. L. Diehl.

opium, and quinine, and ether, and alcohol, let us be assured that they are of a definite strength, and when the physician prescribes a gramme of quinine or twenty-five drops of laudanum let him know that the pills for which he writes, on the one hand, contain just the amount of the alkaloid prescribed, and that the laudanum also has been made from opium of a standard strength, and not from a cheap or exhausted article.

Special laws relating to certain articles of food and drink have existed in this State for many years. Fish, meat, milk, cocoa, vinegar, butter, and cheese have all been the objects of legislation, and provision has been made for their inspection by local officers. But in later years the need of a general, comprehensive law, which should include everything used as food, or drink, or medicine under one statute, has been urged as a necessity both of national and of State legislation.

The inquiry of the National Board of Trade, inaugurated in 1879, resulted in the recommendation of a law, which, with but few modifications, has been adopted in the States of New York, Michigan, Massachusetts, and New Jersey. This law was enacted in our own State in May, 1882, and took effect in the following August. The law as then enacted is as follows: —

[CHAP. 263.]

An Act relating to the Adulteration of Food and Drugs.

Be it enacted, etc., as follows:

SECT. 1. No person shall, within this Commonwealth, manufacture for sale, offer for sale or sell any drug or article of food which is adulterated within the meaning of this act.

SECT. 2. The term "drug" as used in this act shall include all medicines for internal or external use, antiseptics, disinfectants and cosmetics. The term "food" as used herein shall include all articles used for food or drink by man.

SECT. 3. An article shall be deemed to be adulterated within the meaning of this act, —

(*a.*) In the case of drugs, — (1.) If, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality or purity laid down therein; (2.) If, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia, or other standard work on *materia medica*, it differs materially from the standard of strength, quality or purity laid down in such work; (3.) If its strength or purity falls below the professed standard under which it is sold:

(*b.*) In the case of food, — (1.) If any substance or substances have been mixed with it so as to reduce, or lower, or injuriously affect its quality or strength; (2.) If any inferior or cheaper substance or substances have been substituted wholly or in part for it; (3.) If any valuable constituent has been wholly or in part abstracted from it; (4.) If it is an imitation of, or is sold under the name of, another article; (5.) If it consists wholly or in part of a diseased, decomposed, putrid or rotten animal or vegetable substance, whether manufactured or not; or, in the case of milk, if it is the produce of a diseased animal; (6.) If it is colored, coated, polished or powdered, whereby damage is concealed, or if it is made to appear better or of greater value than it really is; (7.) If it contains any added poisonous ingredient, or any ingredient which may render it injurious to the health of a person consuming it.

The State Board of Health, Lunacy, and Charity may from time to time declare certain articles or preparations to be exempt from the provisions of this act; and the provisions hereof shall not apply to mixtures or compounds recognized as ordinary articles of food, provided that the same are not injurious to health, and are distinctly labeled as mixtures or compounds.

SECT. 4. The State Board of Health, Lunacy, and Charity shall prepare and publish from time to time lists of the articles, mixtures or compounds declared to be exempt from the provisions of this act, in accordance with the preceding section. The said board shall also from time to time fix the limits of variability permissible in any article of food, or any drug, or compound, the standard of which is not established by any national pharmacopœia.

SECT. 5. The State Board of Health, Lunacy, and Charity shall take cognizance of the interests of the public health relating to the sale of drugs and food and the adulteration of the same, and shall make all necessary investigations and inquiries in reference thereto, and for these purposes may appoint inspectors, analysts and chemists, who shall be subject to its supervision and removal.

Within thirty days after the passage of this act the said board shall adopt such measures as it may deem necessary to facilitate the enforcement hereof, and shall prepare rules and regulations with regard to the proper methods of collecting and examining drugs and articles of food. Said board may expend annually an amount not exceeding three thousand dollars for the purpose of carrying out the provisions of this act.

SECT. 6. Every person offering or exposing for sale, or delivering to a purchaser, any drug or article of food included in the provisions of this act, shall furnish to any analyst or other officer or agent appointed hereunder, who shall apply to him for the purpose and shall tender him the value of the same, a sample sufficient for the purpose of the analysis of any such drug or article of food which is in his possession.

SECT. 7. Whoever hinders, obstructs, or in any way interferes with any inspector, analyst, or other officer, appointed hereunder in the performance of his duty, and whoever violates any of the provisions of this act, shall be punished by a fine not exceeding fifty dollars, for the first offense, and not exceeding one hundred dollars for each subsequent offense.

SECT. 8. This act shall take effect at the expiration of ninety days after its passage. (Approved May 26, 1882.)

This law has certain points in common with that now in force in England, and also some notable points of difference.

Each law distinctly defines certain terms which are used therein. This feature of the law has the obvious advantage of saving an endless discussion in the courts upon the meaning of terms in the statute. The words *drug* and *food* are clearly defined in each law, and in the Massachusetts law (or rather the United States) the definition of *adulteration* is also stated with unusual clearness and precision.

In the case of drugs, the terms *differ* and *differ materially* are employed, the former relating to officinal preparations of the United States Pharmacopœia and the latter to others not officinal. The former is plainly a more stringent provision than the latter, and justly so, since the officinal preparations are the most commonly used and are by far the most important. Useful preparations when discovered, or proposed, are usually admitted to the Pharmacopœia at each decennial revision of the work. It would seem that a manual compiled with and by the consent of a commission of representative physicians and druggists from the entire country should be admitted as undoubted authority.

In the case of food the various modes of adulteration or debasement are carefully stated. Either one or several of these may exist in a given sample or article, as in the case of milk, in which either the first, third, fourth, fifth, sixth, seventh, or all of them may exist at the same time.

Certain exceptions are made in the British law: —

(1.) In the case of ingredients not injurious to health, *added* to render an article fit for carriage or preservation, and not to fraudulently increase its bulk, weight, or measure, or to conceal its inferior quality.

(2.) In case of patent medicines.

(3.) Where a drug is unavoidably mixed with some extraneous matter in the process of preparation or of collection.

Another clause provides that compound foods or drugs must be in accordance with the demands of the purchaser, with reference to the ingredients contained.

A legible descriptive notice or label attached to an article, stating that it is mixed, exonerates the seller.

The British law also provides that a buyer who purchases with intent to submit an article for analysis must notify the seller of such intention, and offer to divide the article into three parts, each part to be

sealed, and one part delivered to the seller, one part he retains, and the third is submitted to the analyst. If the seller does not accept the offer of the buyer to divide the article, the analyst on receiving it divides it into two parts, one of which he delivers to the purchaser to be reserved by him in case of prosecution.

The French Code also provides for a division of each article purchased into two portions.

In addition to the general law passed by the Legislature of Massachusetts in 1882 an amendment was enacted in the following year providing that the State Board should make prosecutions of offenders, and that a definite portion (two fifths) of the appropriation should be expended in the enforcement of the laws for preventing milk adulteration.

With these two laws upon the statute books we may now inquire what has been accomplished towards an improvement of the food and drug supply in Massachusetts, though such an inquiry may be deemed somewhat premature since less than eight months have elapsed since the enactment of the amendment of the statute.

In compliance with the law, two analysts were appointed soon after the date at which it took effect, and after the passage of the amendment the number of analysts was increased to four, two of whom were appointed for the sole purpose of milk analysis.

The period between the passage of the law of 1882 and the amendment of 1883 was chiefly occupied in the inspection and analysis of samples with reference to ascertaining the actual condition of the supply of the State. Samples have been collected in all parts of the State, chiefly in the cities and large towns.

The whole number analyzed has been about 1400. This number includes over 300 samples of milk.

The percentage of adulteration among drugs has been found to be forty per cent.

Among articles of food forty-seven per cent. were found adulterated within the meaning of the statute.

Of milk seventy-eight per cent. were found adulterated within the meaning of the statute.

Seventeen prosecutions have been entered in the courts on complaint of the Board, one of which was withdrawn in consequence of the death of the defendant. In all the other cases adulteration was satisfactorily proved, but in two of them the defendant escaped conviction in consequence of minor technicalities, while the remaining fourteen were convicted.

As a salutary result of the work thus far accomplished druggists have been stimulated to use greater care in the selection, the purchase, and the manufacture of pharmaceutical preparations. Grocers have appealed to their manufacturers to furnish a better and a purer supply, and milkmen have been taught a useful lesson. We do not pretend to say that Boston has yet a pure milk supply, but we do know that in many cases where we have made repeated analyses from the same establishments there has been a marked improvement.

Within the past six months, or since the prosecutions made by the Board, assayed drugs of definite known strength have become a recognized department of trade. Manufacturers doing business outside of the State have sent to their agents in Massachusetts requesting the return of all preparations which did not conform to the pharmacopœial standard. Wholesale dealers have employed chemists to examine their goods in order to insure a pure stock, and one which should conform as far as possible to recognized standards.

We venture the assertion that the amount of chemical analysis and assay has been far greater in Massachusetts during the past year than ever before, without reference to the official work of the Board.

Certain objections, amendments, and substitutes have been presented to the Act of 1882. These may be enumerated as

(1.) Local Inspection. While, on the one hand, this mode of operation may have certain theoretical advantages, such as a distribution of the work of supervision and a greater convenience to sparsely-settled districts, on the other hand the practical operation of local inspection in Massachusetts has been a failure for many years past. The reasons may be stated briefly: the petty influence of local politics, frequent changes in office, inadequate compensation, and incompetency. Nothing illustrates this better than the habitual use of the lactometer by milk inspectors to the exclusion of thorough chemical analysis. The fallacy of this instrument is so well known that further reference to it is unnecessary.

(2.) Proof of criminal intent on the part of the seller. The insertion of this provision in the present law is all that is desired by the men who sell water in place of milk, or gypsum for cream of tartar, or inferior grades of drugs for those of standard strength. Such a provision would render the law practically inoperative.

(3.) The insertion of a limiting word like "essentially" or "materially" after the word "differs" in the first clause relating to drugs. By this amendment a loose construction of the law and a sliding scale would result; drugs could be sold of a quality corresponding to the price paid, and standards would be ignored. The prescriber might find the one-grain, or two- or five-grain quinine pills containing three fourths or one half these quantities. In some of the preparations examined by the analysts of the Board the strength has been found to be less than one third of that required by the statute.

No better amendment has been proposed to the present law than such as shall provide for its more thorough and rigorous enforcement, such, in fact, as shall protect the honest manufacturers and producers, and at the same time give to the people, the consumers, everywhere and at all times, the opportunity to test for themselves, for a reasonable fee, the quality of the goods which they use. Such a result might be secured in Massachusetts by the establishment of a State laboratory, such as has recently been organized in Paris for the same purpose. At such an institution, properly equipped with chemical apparatus for analysis, with microscopes for food and drug examination, with apparatus for photography, and all other departments requisite for food and drug inspection, all the work now done by the analysts could be performed; and, also, any individual desiring a certificate of analysis of an article could have the work done at the mere cost thereof. The number of persons presenting material for analysis is by no means small. Scarcely a day passes in which some one does not bring to the office of the Board a sample of food or of drugs for this purpose. These people represent the consumers and the retailers who cannot know with certainty the character of the goods which they purchase.

A public laboratory might also be used for the anal-

ysis of all the public water supplies of the State, both for the chemical and for the biological work which they might demand, and also for the inspection of the food and drug supplies of all its hospitals, prisons, almshouses, and other public institutions.

GENERAL PARALYSIS OF THE INSANE.[1]

BY GEORGE F. JELLY, M. D.

CASE IV. S. S., aged forty, married, admitted November 12, 1870, native of Duxbury, Mass. Grandfather and grandmother insane. Said to have had a sunstroke eighteen years before admission to hospital. Habits said to be good. One year since, after hard work and unusual anxiety, he was dull, sluggish, and inactive; would rise in night and wander about in a bewildered manner. In many things seemed changed. Was indifferent to family. Several attacks of partial insensibility. Frequently tripped in walking. Became unable to attend to business, and was finally excited and bombastic. When first seen at asylum was feeble, dull, and bewildered, and he seemed like a rapid case, but he soon rallied, and became much more active mentally, though extravagant and tremulous in speech. He never had convulsions, and only slight semi-conscious attacks.

After two months he passed into a very comfortable state; he was quiet, his speech and gait scarcely affected, and to his friends he seemed almost well. In four months from his admission he left the asylum. He remained quite comfortable for a long time, but mentally weak. After a few months I lost sight of him, but have no doubt that he died some years since.

CASE V. E. A. L., aged forty-eight, married, cooper, a stout, vigorous, coarse, profane man, who has used tobacco and whiskey to excess. Has worked very hard, and has had much trouble with his wife. Six weeks before admission became irritable in manner, very unreasonable, and neglected his business to make foolish bargains; developed delusions of great wealth, but no tremor of lips and no unsteadiness in walking. Very indignant because brought to the asylum, but soon settled down, and declared he would not leave. Very extravagant, declaring he had bought the Fitchburg railroad, and would build a city at his home next summer which would be a "ripper." He failed quite rapidly, but never had convulsions. After some months he developed the usual paralytic symptoms in speech and walk. Ten months after admission he was transferred to Worcester, and died within two years from the inception of the disease.

The next case, No. 6, differs from those already described on account of the sudden and early death of the patient.

CASE VI. D. P. S., aged thirty-nine, single. Admitted February 16, 1872. Coal salesman; native of New York. Father "monomaniac" on subject of religion. His friends said that he had no excesses, but his subsequent history proved that he was somewhat addicted to wine and women. Had worked very hard, and had been subject to severe mental annoyance. He was a little excited one year since, after which he was somewhat melancholy. Within a few weeks had been extravagant, and inclined to make foolish bargains. On admission to asylum very voluble, somewhat incoherent, very happy and extravagant, and had a decided trip in speech. His talk was as follows: "Sheather, in New York is an old friend of mine. My friend Sheather is worth thirty millions. Ed is worth thirty millions, carried on by importing furs. He lives on Fifth Avenue. I have one hundred and fifty millions under my own control. I am the gayest boy out." Soon became entirely contented. Was continually making money; said he could make more money in the asylum than out in the world. He became more quiet, grew stout, but never gave up any of his extravagant ideas or lost the paralysis of speech or in his walk. Each meal was a feast fit for a king, and his room a palace. Seven months after admission he had his first epileptic convulsion, which was repeated several times during the first day, and for a time he was unable to swallow. For a week he had one or more fits every day, and then rallied, and was somewhat clearer. November 24th, nine months after admission, he was again seized with convulsions, but after three hours seemed pretty well. At nine P. M. he retired, and at ten he was dead.

The autopsy showed no gross changes in brain, except excessive congestion. Other organs normal.

CASE VII. J. W. C., aged forty-eight, married, retired sea captain. Admitted June 27, 1873. Said to have had a sunstroke six years before, and had always been a coarse, licentious man, addicted to excessive use of liquor. His friends say that he has been wrong mentally for two years. For thirteen months before admission to asylum had been a patient at Worcester Lunatic Hospital. Was very violent and homicidal at first. He was taken from Worcester on a writ of habeas corpus, attacked Dr. Fisher in court, was remanded to the hospital, and remained till his admission to the McLean. When he entered the latter institution he was mixed, confused, thick in speech, unsteady in gait, and extravagant, but pretty quiet.

He soon became very restless, and three months after admission had violent epileptic seizures, the convulsions being chiefly confined to left arm and leg, though there was marked twitching of both arms and legs. Following these attacks he never recovered his coherence, his left arm and leg became paralyzed and helpless, and he gradually failed. He became filthy, and with his right hand was very destructive. In this condition he was placed under the care of Dr. Mead, and in a few weeks died. An autopsy was made by Dr. Fisher (of which I have no copy).

By a singular coincidence the wife of this patient developed the most characteristic symptoms of general paralysis. I saw her but once, but the extravagance, tremor, and peculiarity of gait were all present. She was sent to the asylum at Concord, N. H., and Dr. Bancroft afterwards told me that hers was a typical case. She survived her husband less than a year.

CASE VIII. E. B. O., aged fifty-three, married, lawyer. Admitted May 23, 1875. One brother had been insane. He had lived very freely, using a good deal of wine, and had had great business anxiety. His was an entirely characteristic case, with more than usual incoherence and confusion. Paralytic symptoms very marked. He improved and left the asylum in six months, still quite weak, but comparatively clear mentally. He is living, his difficulty in articulation is quite marked, and his gait unsteady. He is always cheerful and exhilarated, but is able to live

[1] Concluded from page 225.

most of the time outside of an insane hospital, though sometimes placing himself under restraint voluntarily. He reads a good deal, and is able to make himself useful about his home. He resembles an overgrown child. He has had several apoplectiform seizures. It is more than eight years since the commencement of his disease. I think that there can be no mistake in the diagnosis as it has been confirmed by several physicians familiar with general paralysis.

Case IX. C. D. W., aged thirty-seven, married, architect. Admitted September 16, 1877. Had been subject to chronic diarrhœa. Had worked very hard, and has been made very anxious in settling an estate. For two months has seemed changed and strange. Developed extravagant delusions three weeks before entrance to the asylum, and for three days had been much excited. On admission his speech was thick, his lips tremulous, and he was very extravagant. He offered me at once a million dollars for the asylum. He soon became more excited, and had a long run of maniacal excitement, in which he was violent and homicidal. He was full of the most extravagant delusions, owned all the money and diamonds in the world, all the railroads could go round the world in two minutes, he could raise the dead, banish death, etc. After a few months became more quiet, but still deluded and threatening. He was taken through persistency of friends to Probate Court, where he manifested great excitement, but by advice of judge went away on a trip to California. Returned much more excited and much worse. After a time was more quiet; but gradually grew more dull and feeble, and died February 4, 1879, nineteen months after inception of disease, of exhaustion and lung symptoms.

Autopsy by Dr. E. G. Cutler: —

Rigor mortis well marked, body in good condition; not emaciated.

Nothing special about calvaria except that it was somewhat dense.

Vessels of dura mater full of blood. Membrane itself of normal thickness. Considerable increase of subarachnoid fluid. Pia mater much thickened, especially over apex; more marked over left convolutions than over right; at base of brain considerably adherent. Thickening at base less marked than at apex. Vessels at base showed no change.

Convolutions of brain, especially at vertex and in frontal region, decidedly atrophied, and on the left side at Isle of Reil quite a cavity had formed in marked contrast to condition of the brain on the corresponding portion of right side, which, however, was quite atrophied.

Pia mater quite firmly adherent to surface of brain, especially at vertex, producing slight lacerations of brain substance when removed.

Brain firm on section.

Amount of blood in brain not excessive.

Nothing abnormal in corpus callosum, pons, or medulla. No increase of blood or fluid in lateral ventricles.

Nothing abnormal in lateral sinuses.

Diaphragm on right side at fifth rib; on left side at fifth intercostal space.

Lower lobe of left lung adherent anteriorly over a limited space. Right lung adherent universally (old and dense adhesions). Some consolidation of lower lobe of left lung, and œdema of both lobes.

Red hepatization of a portion of lower lobe of right lung and considerable œdema.

Right side of heart distended by fluid black blood. Mitral valve admits two and one half fingers. Nothing remarkable about heart.

Spleen of normal size and color. On section dark and full of blood.

Left kidney normal in size. On section rather cyanotic. Capsule strips easily, leaving a smooth surface. Cortical portion healthy. Right kidney healthy. Nothing abnormal in intestines, liver, stomach, or bladder.

Case X. G. G. K., admitted December 10, 1870, aged forty-six, married, agent for express company. Uncle died insane.

A very active, healthy man, and an athlete. Very licentious, and has drank freely. One year before admission was dull and indifferent, irritable and suspicious. Soon afterwards he became excitable and pugnacious. Within three days talked very extravagantly, thinks himself irresistible to women. Two days after he entered the asylum, very happy and contented, and said that $10,000 would not tempt him to leave, and was full of suggestions of wonderful improvements in the institution. He said that he would deliver a lecture in Music Hall, and would issue one million tickets at $100 each.

Six weeks after admission very noisy and extravagant, violent and filthy. He frequently said, "I am God Almighty; I can do everything." In three months he was more quiet. In six months bland, effeminate, quiet, and demented. In fifteen months he was much troubled with hallucinations of hearing, his dementia was far advanced, and he was constantly muttering incoherently to himself. He was losing strength, but at that time manifested no paralysis whatever, and though this symptom was constantly looked for it never appeared, causing some doubt as to the diagnosis. In twenty months he was transferred to the Worcester Hospital, where he died about four years after the inception of the disease, or from his first exhibition of mental symptoms. The superintendent sent me this copy of the autopsy: —

Right pupil dilated to twice the size of left. Scalp torn off with great difficulty. Skull dense and of normal thickness. Dura mater abnormally adherent to calvaria, cloudy, and greatly thickened. On removal of skull-cap the brain appeared in color like healthy pus, especially over the openings into the convolutions. Subarachnoid spaces contained serum, normal in amount. Pia mater of the thickness of vellum writing paper, peeling off without difficulty from the substance of the brain. Convolutions not deep or numerous. Brain substance more than ordinarily firm. Corpus callosum, fornix, velum interpositum, and corpora quadrigemina healthy. Corpora striata and thalami symmetrical and normal in consistence and color, both on their surface and in their substance. Amount of fluid in the ventricles normal. Pons varolii, medulla oblongata, and cerebellum healthy. Cerebral arteries full of blood and their coats healthy.

Microscopical examination of the membranes of the brain shows great increase of fibrous tissue, infiltrated with an abundance of young cells. No appearance of fatty degeneration or other change in the brain substance itself.

Kidneys enlarged, their capsules easily torn off; vessels enlarged and injected. Extravasations frequent. Cells cloudy and granular. Connective tissue slightly increased. Other organs healthy.

CASE XI. Mrs. S. J., aged thirty-five, married, native of Massachusetts, was admitted to McLean Asylum in a state of great physical prostration, mental depression, and hypochondria, with a history of long-continued ill health. For weeks there were no indications of general paralysis. She manifested great mental distress, believed that she had been very wicked, thought that she must soon die, and that she could never see her husband again on account of her unworthiness. As she gained in physical strength she became somewhat exhilarated, at times very talkative, at other times emotional and tearful.

This state continued till nine months after she came to the asylum, when she seemed much confused, and became very extravagant in her ideas, believing herself some great and important personage. She then for the first time manifested tremor of lips and tongue and difficulty in articulation. Her conversation was as follows: —

"I would give all the world to tell you who I am. I cannot tell you who I am. I have but one husband, and he who is my husband writes his name through my head, my heart, my toes. It is God. I am a goddess. There is no more death. I don't wish to go into the yard with attendants. I am above them. I cannot associate with them. My associates are queens. God claims me." She would go on in this way for hours, accompanying her words with gestures, and articulating with difficulty.

During the next month she became more silly, entirely chaotic, and very untidy, and was much given to masturbation. She sat by herself giggling and smirking, and staggered very badly when she attempted to walk, swaying to either side, and using her hands to keep her equilibrium.

This state of things continued for five months, when she again seemed depressed, refused food, and was fed for some time with the stomach tube.

During the next four months she failed steadily, the paralytic symptoms increased, and she died in two years and nine months from the first appearance of mental symptoms. There were never convulsions, but several apoplectic seizures.

An autopsy by Dr. Fitz showed marked atrophy of brain, especially of middle lobe, with a few small cysts of the arachnoid.

PROTRACTED LETHARGY AFTER THE USE OF BROMIDE OF SODIUM BY ONE HAVING THE MORPHIA HABIT.[1]

BY E. G. CUTLER, M. D.

ON the 29th of April, 1880, I was called to see a man, said to be a morphia taker, who in trying to break himself of the habit had followed out sombody's "cure" for several days, and in consequence lay in a stupor.

The following history was obtained: —

The patient, a physician, had taken morphia subcutaneously for perhaps twenty years. Several times he got down to very small doses, and twice had left it off altogether for months. He had served in the army as a surgeon, and been honorably discharged several years before. Recently he had been an inmate of Dr. Day's Washingtonian Home, but all the time while there took opium surreptitiously, obtaining it without any difficulty, he said, from the engineer of the establishment. (In justice to Dr. Day it should be said that this employee is said to have been soon discovered and promptly discharged.)

On the 19th of April Dr. ——, my patient, commenced to follow out the cure laid down by Dr. Mattison in the *Quarterly Journal of Inebriety*, June, 1879. He took *sixty* grains of the bromide of sodium three times for the first twenty-four hours, and each day for the next seven days he increased the dose by ten grains over the dose of the preceding day, thus making an increase of thirty grains every twenty-four hours. When he had taken the dose one hundred and twenty grains thrice the cure was to be complete. This programme was carefully followed out for a whole week. On the first day he diminished the quantity of morphia he had been taking by one quarter (I think). The next day he did the same. The third and fourth days he rapidly diminished the morphia to a very small fraction, and on the fifth he omitted it entirely. To return to the history of the bromide. He got along well enough till the fifth day, feeling no special inconvenience, retaining his appetite and digestion, sleeping well, and attending to the calls of nature. On the fifth day he began to be somnolent, and prepared his doses of bromide for that and the next two days, and gave directions to be roused at the proper times to take his medicine and food in case he should be asleep, and requested his attendants to give him small doses of nitre daily. On this day he first kept his bed for the greater part of the time. The sixth day it was quite difficult to rouse him sufficiently to take his drugs and feed him; and on the seventh this difficulty had very greatly increased so that it was nearly impossible to give the last dose of the bromide. The act of swallowing was very slow.

From this time, the 25th of April, till I saw him on the afternoon of the 29th, his sopor progressively increased to lethargy, he had taken no food or drink of any kind into the stomach, but very little urine had been passed, and there had been no movement of the bowels. I found him in bed lying in a natural position, inclined towards the left, with a sunken countenance and a dusky earthy color of the skin. The pulse was very feeble and quite slow and the surface of the body cool. The temperature, though taken at the time, I unfortunately do not remember exactly; it was a little below the normal standard. The respiration was slow, rather superficial, and accompanied by no adventitious sound. The pupils were neither contracted nor dilated, and did not respond to the stimulus of light. There was no unpleasant odor to the breath, the mouth and lips were dry. The tongue could not be seen. Reflex motion could not be excited either by touching the conjunctiva, thrusting a feather up the nose, pinching, or otherwise irritating the skin. He could not be roused to consciousness, or to make any, even the slightest, movement. About four ounces of highly concentrated urine free from albumen were drawn by the catheter. Nothing had been swallowed for four days, though repeated attempts had been made to feed him. As his vitality seemed to be pretty low, enemata of milk, beef tea, and alcoholic stimulants were given at first, and at night small doses of strychnia were carefully tried, alternating with nitre.

The following day he looked less sunken and had a shade better color, the breath had the faintest trace of the unpleasant odor usually observed after large doses

[1] Read before the Boston Society for Medical Observation, December 3, 1883.

of bromide, the pulse was fuller and stronger, the temperature a little above the normal. The urine drawn by the catheter was about the same in character and less than two ounces in quantity. The eyelid was slowly closed once on touching the conjunctiva, but only after repeated efforts at rousing the patient. As nothing could be felt in the rectum, and efforts to feed by the mouth remained fruitless, the enemata were continued.

The faradic current was then employed, one pole being placed at the feet and the other at the hands; again the current was run from the back of the neck to the lower part of the abdomen and in various directions. The same treatment was continued, and the patient remained asleep and unconscious, though evidently gaining, till the 10th of May, when the eyelid began to answer irritation of the conjunctiva pretty constantly. A few days later the legs would draw up on sharply irritating the feet, and the bowels were moved by an enema. On the 12th he could be fed by the mouth, though the act of swallowing was slow, and took place only after repeated urging on the part of his attendants. He quickly relapsed into sound sleep after being roused. During the next day or two he moved his legs a little in the bed and coughed slightly. On the 15th he remained awake a good part of the daytime and voluntarily moved about in the bed. He could not hold a cup or any article in his hands nor feed himself, though he could make slow, awkward movements with the hands and fingers when requested to do so. The unpleasant odor of the breath increased in intensity till about the 6th of May, when it began to diminish, and by the 15th had entirely disappeared. The catheter had to be employed till this date (the 15th), when he passed his water voluntarily; at no time was it necessary to use the catheter more than once in the twenty-four hours, so little urine was secreted. The bladder contracted very slowly indeed, and it was only after calling attention to the matter that the urine was passed at first. The throat remained dry for some days after the swallowing of food was resumed. The legs could be moved before the arms and the feet could always be manipulated better than the hands, which did not recover the power of executing such complicated movements as feeding himself, buttoning the collar, and so forth, for a fortnight or more after he was thoroughly awake.

The first reflex observed was the eyelid on irritating the conjunctiva, next the facial muscles, and then the legs and other parts of the body; the hands and arms apparently last. About the 12th he would mutter a few words unintelligibly when strongly roused; they had a far-off, tired, sibilant sound, as is often observed in severe illness with dry lips and tongue, and it seemed to be a difficulty of articulation from incomplete muscular control; later a wrong word was sometimes used or a whole one forgotten. The senses of taste and smell seemed to be blunted for quite a time; sight and hearing were apparently not much affected. No cutaneous eruption was observed at all, though the skin had the dusky, dirty color mentioned above.

The patient lay sound asleep from April 25th till May 12th, a period of eighteen days, and for three days longer was asleep most of the time.

The treatment consisted of the exhibition of nutritive enemata, electricity, strychnia, alcoholic stimulants, diuretics, frictions of the skin, and baths, quinine, iron, and, later, cod-liver oil. Altogether 1890 grains, or about four ounces, of bromide of sodium were taken in one week.

The patient assured me the latter part of the month of May that he had lost all desire to resume his morphia, but he was left in such an apathetic state from his bromide that I felt that his statement was of little value then. I understand that he faithfully kept his promise not to use morphia for several months, but that he resumed it again, I know from having been called to him later. As I had little hope of doing him any permanent good, I referred him to Dr. C. F. Folsom. Since then, within two years, I have received notice from a "specialist" in Lawrence of his "permanent cure." Yesterday I called at the house where he lived, and learned that he had resumed his morphia and was taking with it at the same time small doses of atropia. He is entertaining the idea of beginning another "cure."

It has fallen to my lot to treat but few cases of morphia or opium taking. Those whom I have seen have mostly been at the Carney Hospital, where we could perfectly control their movements. The chief difficulty the patients have experienced has been a restlessness and sleeplessness which was at first hard to control. The opiate has been left off by rapidly diminishing the dose during the course of a week. I have never seen a very bad case, and so am little able to judge of the comparative merits of the method by Mattison and the ordinary ones. That his method as laid down in the paper referred to is not devoid of danger in some cases I am convinced. In fact, I am told of a fatal result in one case treated by the gentleman himself. That, properly watched, and the drug suspended when the patient becomes soporose, and elimination encouraged, it may prove of some service, I should think possible.

REPORT ON THEORY AND PRACTICE OF MEDICINE.

BY GEORGE B. SHATTUCK, M. D.,
Visiting Physician Boston City Hospital.

I.

COMA (THE SO-CALLED DIABETIC COMA) THE RESULT OF AUTOCHTHONOUS INFECTION THROUGH ABNORMAL PROCESSES OF DECOMPOSITION.

Last year[1] we gave an abstract of an important contribution from Dr. Fr. Th. Frerichs to the clinical history of the so-called "diabetic coma" and of sudden death in diabetes, in which he describes three quite different forms of sudden death in diabetes arising from different causes not understood, the acetonuria, when present, being regarded merely as a symptom. Since then Dr. H. Senator, in an address[2] before the Berlin Medical Society, has approached the subject from a still broader point of view, and argues, not only with Frerichs, that the term acetonæmia should be discarded, but that the adjective "diabetic" should be given up as in any way characterizing the picture, and that we should retain simply the term Coma from Self-Infection. Senator is led to take this position from having on various occasions observed much the same picture as that presented in "diabetic" coma in several other diseases, and notably in pernicious anæmia. He acknowledges the same ignorance as Frerichs as to the

[1] Journal, vol. cviii., p. 295.
[2] Zeitschrift für Klinische Medicin, vol. vii., p. 235, 1883.

nature of the poisonous products evolved within the economy, but does not think that they should be regarded as peculiar to diabetes. There are probably a number of these products, and it is also probable that one or more of them are common to several different diseases.

Senator sums up his consideration of the subject in the following propositions: —

(1.) Acute and chronic dyscrasias may arise not only by the retention of normal excreta, but also by the absorption of abnormal (poisonous) products of metamorphosis formed in the body itself, as well as by an abnormal collection of otherwise common substances.

(2.) The most common source of such autochthonous dyscrasias springs from anomalies of the digestive apparatus, and next from diseases of the bladder[1] and from extreme anæmias.

(3.) The consequences of such dyscrasias impress themselves especially upon the nervous system and the kidneys.

(4.) Next to uræmia the most characteristic of these acute nervous affections is the group of symptoms described by Kussmaul as "diabetic coma," the cause of which is to be sought in various toxic agents.

(5.) This group of symptoms of Kussmaul's may develop itself in the course of other serious maladies besides diabetes mellitus, as, for instance, in pernicious anæmias, and is not necessarily associated with the development of the wrongly so-called "aceton reaction" of the urine, the red reaction to chloride of iron.

COMA CARCINOMATOSUM.

Under the above title v. Jaksch,[2] Professor Nothnagel's assistant, contributes to this subject of "coma from self-infection" a case of carcinoma of the stomach in which death was preceded for seventy-four hours by a coma resembling in all respects the "diabetic coma," the urine containing aceton and diacetic acid in large quantities, but no sugar. The patient's strength was good at the time the coma made its appearance, and the cachexia was not marked. At the autopsy the kidneys were found to be healthy, and although changes were present in the lungs they were not of a character to account for the coma and peculiar respiration; such pulmonary changes, however, suggest Penzoldt's view that deficient excretion by the lungs — the usual channel — favors the poisonous action of the aceton upon the economy.

V. Jaksch had previously seen three cases of diabetes terminating in coma, and, although in each of these cases the pathological conditions revealed by the autopsies were entirely different, the symptoms preceding death were the same. In these cases, also, diacetic acid was present in the urine in large quantities for a considerable time. V. Jaksch himself has elsewhere[3] reported numerous instances of diaceturia unattended by coma, but in regard to these he states that the diaceturia was present only during a limited period of a few days, and accompanied by high fever. Whether the lungs were crippled in any of these he does not state. He assumes a non-committal attitude as to the connection of the diaceturia with the coma, and is engaged upon a further study of the subject.

In a previous paper,[4] the result of studies in the chemical laboratory at Prague, v. Jaksch divides pathological acetonuria (a small quantity of aceton is common in the urine of health) into four forms: (1) febrile acetonuria; (2) diabetic acetonuria; (3) acetonuria in certain forms of carcinoma, of which he had observed three cases at that time, ending in rapid dissolution though not in coma; (4) acetonuria resembling that present in the so-called acetonæmia of Kaulich and Cantani.

ACETONURIA. IS ACETON A POISON CAUSING INTOXICATION AND COMA.

Professor Penzoldt,[5] of Erlangen, not satisfied with the negative conclusions drawn by Frerichs from the laboratory studies of his assistant, Dr. Brieger, as to the poisonous properties of aceton, pursued the subject by further experiments upon rabbits. Frerichs found that large quantities of aceton could be introduced into the circulation of men and of dogs without visible effect, and concluded it was probably an innocuous resultant of a chemical process, although decided effects were produced upon rabbits, Penzoldt finds with rabbits that by retarding excretion, which takes place largely through the lungs, after its exhibition intoxication, hebetude, and coma follow; he also obtained less marked effects without influencing excretion. The disabling effect of diabetes at certain stages upon the lungs is well known, and Penzoldt's experiments indicate a legitimate comparison between uræmia attendant, under suitable conditions, upon renal incompetency and acetonæmia attendant, under suitable conditions, upon pulmonary incompetency. Penzoldt merely claims, as the result of his study, an increased probability, but by no means a proof, that aceton is an active agent in producing diabetic coma.

Dr. Mackenzie, on the other hand, in commenting on the analysis of the cases at the London Hospital (printed below) says: There is another circumstance that influences the occurrence of coma, though I am not aware that any one has drawn attention to this point, and that is freedom from, or only slightly developed, affection of the lungs. Thus in my series, in the nineteen fatal cases, the lungs were found after death unaffected in seven; in three, in which there was no necropsy, there were no signs of disease in the chest during life, and the mischief in the lungs was only recent in four; so that there was either no pulmonary disease, or only recent, and in some slight mischief in fourteen out of nineteen cases of diabetic coma. This has very important prognostic significance, for when well marked signs of disease of the lungs are discovered in a case of diabetes the probability is that the case will assume the characters of a rather rapid form of (pneumonic) phthisis, the sugar lessening as the pulmonary disease advances, and usually disappearing from the urine prior to the death of the patient. On the other hand, when pulmonary disease is absent or slight the occurrence of coma is more to be feared, especially the younger the patient, and the more acute the disease. It is necessary, in order to understand the pathology of diabetic coma, to consider its mode of oncoming and special characters.

ANALYSIS OF FATAL CASES OF DIABETES AT LONDON AND GUY'S HOSPITALS.

DR. STEPHEN MACKENZIE,[6] with the assistance of Dr. Gabbett, medical registrar, has recently analyzed the records of all the fatal cases of diabetes in the

[1] Sir Andrew Clark's catheter fever?
[2] Wiener Med. Wochschr., Nos. 16 and 17, 1883.
[3] Berliner Chemische Berichte, xv., H. 11.
[4] Zeitschr. f. klin. Med., v., p. 346, 1882.
[5] Deutsches Archiv für klin. Med., vol. xxxiv., p. 127.
[6] British Medical Journal, April 7, 1883, page 655.

London Hospital during the last eight years and a half, and the results are given in the following table: —

Analysis of all the Fatal Cases of Diabetes in the London Hospital, from the beginning of 1874 to Midsummer, 1882.

Death by coma; no gross disease found post mortem			7
Death by coma; no post-mortem examination	No signs of pulmonary or other visceral diseases during life	3	4
	With pulmonary disease during life	1	
Death by coma	Recent pneumonia or phthisis	4	8
	Old pneumonia or phthisis	4	
Cerebral hæmorrhage			1
Cerebral meningitis; coma			1
Cerebral tumor			1
Spinal cord disease and phthisis			1
Stricture of urethra; suppurative nephritis; coma			1
Scrofulous nephritis			1
Pneumonic phthisis			9
Scirrhus of pancreas; sudden collapse			1
Gangrene of foot; death rather sudden			1
Dermoid ovarian cyst; calcified mesenteric glands			1
			37

Dr. Frederick Taylor[1] gives an analysis of fatal cases of diabetes at Guy's Hospital as follows: —

Coma	No visceral lesions	14	26
	Visceral lesions inactive	3	
	Visceral lesions active	7	
	No post mortem	2	
Coma (diabetic?); renal disease			3
Pneumonia; influence of coma doubtful		1	3
Coma absent; no post mortem		2	
Phthisis, pneumonia, Bright's disease, peritonitis without coma			11
			43

French clinicians seem to meet with diabetic coma but rarely, and are inclined to regard the greater number of cases reported from Germany and England as due to the greater consumption of alcohol.

SUMMARY.

As the result of the contributions of Frerichs, Senator, v. Jaksch, Penzoldt, and others, the following statements may be made: —

(1.) The so-called "diabetic coma" is only one of several similar forms of intoxication in different diseases.

(2.) Aceton, or diacetic acid,[2] may still be proved to be a poisonous agent in the production of this condition, but it can in any case be but one of a number of such agents evolved within the system, and the name "acetonæmia" is unsuitable at present. Other substances, it should not be forgotten, also give the red reaction to chloride of iron.

(3.) Certain pathological conditions (of the lungs?) *may* be necessary to allow the poisonous action of diacetic acid upon the economy.

(4.) A better knowledge of the whole subject of the formation of poisonous agents within the economy under favorable conditions may reasonably be expected from physiological chemistry, and of their mode of action from further clinical observation.

(5.) The physiological hypotheses explanatory of the sense of fatigue as being the result of such agents, and the evolution of the so-called "ptomaines" in dead bodies point in this direction.

HEREDITARY POLYURIA.

M. Weil[3] reports a striking instance of polyuria as a family characteristic. He investigated the medical history of ninety-one members of the family of a patient, the subject of polyuria (diabetes insipidus), of whom seventy were living at the time, and found that no less than twenty-eight were polyuric. These polyurics had, as a rule, enjoyed good health, and many reached advanced age without any treatment. Weil expressly excludes imitation (canine polyuria) as an explanation in these cases, but it is difficult to avoid a suspicion of it.

1 Guy's Hospital Reports, xxv., p. 147.
2 Diacetic acid = aceton and carbonic acid.
3 Wien. Med. Presse, No. 40, 1883.

II.

MYXŒDEMA AND CRETINISM AS DEPENDENT UPON CHANGES IN THE THYROID GLAND.

At a recent meeting[4] of the Clinical Society of London (November 23, 1883) the exhibition of a typical case of myxœdema in a female by Dr. Drewitt gave rise to a discussion, and especially to some remarks by Dr. Felix Semon, who was present, which were certainly interesting, and may eventually throw more light upon the now obscure ætiology and pathology of this disease, which clinically is already pretty accurately mapped out. The gross resemblances of myxœdema and cretinism have struck many observers, and Sir W. Gull in describing the former disease, in 1873, was so much impressed by them that he termed it "a cretinoid state supervening in adult life in women," his cases having occurred — as is most often the fact — in women and those well advanced in the child-bearing period. Since then atrophy of and changes in the thyroid body have been observed by Dr. Ord, to whom we owe the name myxœdema, and others incidentally in not a few cases of the disease.

At this meeting of the Clinical Society Dr. Semon referred to a paper by Dr. Kocher, Professor of Surgery at the University of Berne, read at the twelfth Congress of German Surgeons held in Berlin last April, on the Extirpation of Goître and its Consequences. His experience was based upon 101 total or partial extirpations, and he discussed in the second part of the paper the consequences of the operation. His attention having been called by the subsequent medical adviser to the marked cretinoid condition of a patient upon whom he had operated some years previously, in 1874, he was so much struck by the extraordinary changes which had taken place that he immediately communicated with all those upon whom he had operated to secure an examination. He was able to obtain the attendance of only thirty. In sixteen of these cases a partial extirpation only had been made, that is, one lobe with or without the isthmus had been removed. In all the cases belonging to this category the result of the operation had been an excellent one, that is, the dyspnœa for which the partial extirpation had been performed had disappeared, and the general health had suffered in no respect. Matters, however, were entirely different with regard to the eighteen patients on whom total extirpation of the thyroid body had been performed, and who put in a personal appearance. Of these eighteen, two only showed an undeteriorated, or even improved, state of health. But it was a most remarkable circumstance that in one of these two cases a small accessory thyroid gland had undergone a hypertrophic change, and that in the other a recurrence of the goître had taken place. All the remaining sixteen patients showed more or less considerable derangement of their general health, the changes being much more developed in the oldest cases than in those more recently operated upon. These changes were therefore of a distinctly progressive character. As to the nature of the changes themselves, they were, in the order as related by Professor Kocher, the following:

4 Lancet and Times and Gazette, December 1, 1883.

A few months after the operation early fatigue, weakness, and sensation of heaviness in the limbs were complained of. In many cases these were preceded by actual pains in different parts of the body. Soon afterwards a sensation of coldness, especially in the extremities, was superadded. In winter time the hands and legs swelled, became bluish-red and cold, and the patients suffered from chilblains. The mental activity decreased; thought, speech, and movements became slower. At the same time the patients were themselves painfully aware of these facts. Simultaneously with the above symptoms swellings of the face and body made their appearance. They were sometimes at first only transitory, but soon became lasting features. The parts most and earliest affected were, as a rule, the infra-ocular region and the eyelids, which showed a somewhat transparent swelling; later on, the nose became thick, the lips coarse, hands and feet swollen, and the waist stouter; the skin became dry, desquamated a little, was infiltrated, and its elasticity lost; it could only be lifted in thick folds; the hair fell out. A most marked symptom in the more progressed cases was anæmia. Examination of the blood showed a relative richness of leucocytes, inasmuch as the number of the red blood corpuscles was greatly diminished. In the cases in which the patients at the time of the operation were still growing the development became most markedly arrested after the operation. Rarer symptoms were slight dysphagia, giddiness, and headache. Ophthalmoscopic examination, made in a number of cases by Professor Pflüger, did not reveal anything abnormal beyond remarkable narrowness of the arteries. Professor Kocher concluded his description, of which the most prominent features only were given in this epitome, by the remark that the relationship of the above complexity of symptoms to idiocy and cretinism was unmistakable. Being himself unaware of the existence of myxœdema, he proposed for the affection he described the name of cachexia strumipriva.

Dr. Semon pointed out that observations similar to Professor Kocher's had been made by Professor Revardin, of Geneva; that scarcely a symptom was present in myxœdema which was not met with in the cases of total extirpation, and, on the other hand, one symptom only had been observed in a certain number of these cases which was not present in myxœdema, namely, the arrest of the growth of the body after total removal of the gland in children, but this was explicable by the fact that myxœdema was essentially a disease of adult life. Professor Kocher's observations seem to indicate that there are three conditions closely allied to each other, and having in common either absence or probably complete degeneration of the thyroid body, namely, cretinism, myxœdema, and the state after total removal of the thyroid body.

A committee should be appointed by the Society to investigate and report upon this subject. Its report would naturally be awaited with much interest. In the course of the subsequent discussion of myxœdema Dr. Ord said in regard to treatment that in more than one case he had recently seen progressive improvement up to apparent cure under jaborandi; in about fifteen other cases he had seen also progressive improvement under this treatment, and he now used it in all cases, giving the tincture of jaborandi in half-drachm and drachm doses for months. Others, however, have been much less fortunate.

In connection with the subject of myxœdema it may not be amiss to record, as a matter of bibliography, the report of another typical case by Dr. Robert Kirk.[1] The patient was a woman in middle life who had borne six children, and been subjected to a good deal of suffering, mental, moral, and physical, a history which corresponds with a large number of previously reported cases. There had been a syphilitic exposure, which is an exceptional feature and may be considered incidental. All the other clinical features correspond closely with the type of the disease as now recognized.

III. ACUTE GONORRHŒAL RHEUMATISM.

Dr. Davies-Colley[2] records a number of cases of this affection, varying somewhat in character and in their history. The obstinate resistance to treatment and chronic course of some of these rheumatoid cases make welcome any well-considered contribution to their ætiology and treatment. The present writer uses the limiting adjective in so wide a sense that it should not be understood that the discharges from the genital organs which give rise to these inflammations are necessarily gonorrhœal; he suspects that a balanitis or even a leucorrhœal discharge may be sufficient cause. His experience coincides with that of several French observers as to the not infrequent occurrence of cardiac complications, especially in the chronic cases.

He believes that several distinct affections are often confused together under the name gonorrhœal rheumatism, which he enumerates as follows: —

(1.) *Gonorrhœal synovitis*, a chronic affection, occurring in the male, generally in the knee-joints. Very rarely it is acute, and goes on to suppuration.

(2.) *Gonorrhœal arthritis* (attacking especially the ligaments), an acute affection, occurring in the female quite as often as in the male; as a rule, attacking at the outset several joints, and afterwards confined to one, most frequently the elbow-joint, affecting especially the fibrous tissues of the joint, and only secondarily the synovial membrane and cartilages.

(3.) *Gonorrhœal inflammation of fibrous structures not connected with the joints*, for example, the plantar fascia, sclerotic, iris, the peri- and endocardium; this gonorrhœal inflammation of the plantar fascia sometimes occurs in the acute form. Inflammation of the first three structures usually occurs in connection with chronic gonorrhœal synovitis. In the last two situations inflammations seem to be generally associated with gonorrhœal arthritis.

With regard to the second class his remarks are summarized in the following résumé: —

(1.) It usually occurs during the acute stage of gonorrhœa, or some purulent discharge from the genital organs, in adult patients under middle age.

(2.) It occurs as often in females as in males, if not more often. Of twelve cases recorded by the writer nine were in females.

(3.) It may attack any joint, but most often the elbow-joint. Eight of the writer's twelve cases were in the elbow.

(4.) At first it attacks several joints, like acute rheumatism, and then confines itself, as a rule, to one.

(5.) Its seat is the fibrous tissue of the joint. There are great œdema, redness, pain, and tenderness. The ligaments are softened, and the cartilage may be disorganized. There is but little synovial effusion, and constitutional disturbance is but slight.

[1] Glasgow Med. Journ., January, 1884.
[2] Guy's Hospital Reports, vol xli., p. 187, 1838.

(6.) It may be confounded at first with acute rheumatism, later on with phlegmonous erysipelas, bursitis, lymphangitis, phlebitis, gout, and pulpy disease of the synovial membrane.

(7.) It rarely, if ever, suppurates, but is especially prone to set up fibrous anchylosis.

(8.) The best treatment is to cure the discharge, keep the joint perfectly still, and apply uniform pressure as long as the acute stage lasts, and then to use passive motion.

(To be concluded.)

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

FEBRUARY 13, 1884. Meeting called to order at eight o'clock. DR. R. T. EDES, chairman, presiding. The records of the last meeting were given in summary, and approved.

The paper of the evening was presented by DR. S. W. ABBOTT, Health Officer, Massachusetts State Board of Health, Lunacy, and Charity, on

MODERN LEGISLATION IN REGARD TO THE ADULTERATION OF FOOD AND DRUGS,

which is printed in full on page 241 of this number of the JOURNAL.

DR. B. F. DAVENPORT, State Analyst, then described the means employed in the detection of impurities in various medicinal substances as follows: —

As analyst under the Adulteration Act I have, as the result of my first year's work, reported to the State Board upon 680 samples of about 100 different kinds of pharmacopœial drugs, of which I found 284, or 41.76 per cent., to be adulterated within the meaning of that act. This defines as an adulteration in drugs, including all medicines for internal or external use, antiseptics, disinfectants, and cosmetics (1) if when sold under or by a name recognized in the United States Pharmacopœia it differs from the standard of strength, quality, or purity laid down therein; (2) if when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia or other standard work on materia medica, it differs materially from the standards of strength, quality, or purity laid down in such work; (3) if its strength or purity falls below the professed standard under which it is sold.

Those drugs have principally been selected for examination which were of the greatest importance as medicines, and which were known to be especially liable to vary from the standard quality, the profit of debasement being great, and detection thereof difficult from requiring special technical knowledge.

Of chiefest importance, therefore, are opium and cinchona bark, with the many preparations made therefrom.

Of the forty-six samples of powdered opiums examined hardly one of the not evidently reduced samples fell below the twelve per cent. of morphine, the minimum limit of variability allowed by the United States Pharmacopœia, 1880, and but one exceeded the maximum limit of sixteen per cent. Thus the limits of the United States Pharmacopœia seem to cover all fair samples likely to be found in our market, of which the average morphine content is about fourteen per cent. The 1880 Revision of the United States Pharmacopœia seems, upon a superficial view, to have raised the minimum limit of morphine strength of powdered opium two per cent., but it is not really so. The minimum limit of twelve per cent. required by the Revision of 1880 is by an excellent process of assay, in which all the requirements are given in full detail, while the minimum of ten per cent. required by the Revision of 1870 is by a totally different process in which many of the details needed for obtaining any definite results are totally omitted. For instance, the concluding sentence of the method is, when speaking of the crude crystals which have been obtained, "To purify these boil them with two pints of alcohol until they are dissolved, filter the solution while hot through animal charcoal, and set aside to crystallize." Now according to my own experience in working upon an average opium this amount of alcohol of that strength will not dissolve all the morphine crystals obtained, but it requires about half as much more alcohol. Then the amount of the animal charcoal to be used is not mentioned, a very material point considering that it absorbs quite a per cent. of the morphine, which cannot be afterwards all recovered from it even by repeated additions of boiling alcohol, yet the 1870 United States Pharmacopœia does not provide for the addition of the alcohol even once. Then there is no limit given of the time to set it aside to crystallize, another very important defect, considering that the given amount of alcohol would hold in solution, even when cold, about one quarter of all the morphine from a ten per cent. powder. All this would be lost to the assay unless the alcohol be set aside long enough to deposit it by evaporation. It can thus be very readily seen that the process of assay by which the United States Pharmacopœia, 1870, required a powdered opium to yield at the least ten per cent. of morphine might be honestly conducted so as to require a considerably higher morphine per cent. than the United States Pharmacopœia, 1880, requires for its twelve per cent. by a very definite method. Conducted, however, even to the best advantage for the sample of opium, I think that the two standards will be found to be just about the same. In other words, that although the Revision of 1880 seems to have raised the minimum standard for powdered opium two per cent. it has not really raised it at all.

Now in regard to tincture of opium there prevails much unfounded apprehension on account of the great supposed increase in its strength. This, according to the last edition of the United States Dispensatory, is not sustained by the real facts. It is founded, I believe, principally upon the assertion of Dr. E. R. Squibb that he will, since the last Revision of the United States Pharmacopœia, put now six grains of morphine into one fluid ounce of his laudanum instead of only four grains as formerly, thus making an increase of fifty per cent. in *his* morphine strength, according to the Dispensatory, "allowing the opium to be wholly exhausted of its active principles, one grain would be represented by very nearly eleven minims. According to the United States formula of 1880, while in the United States Pharmacopœia, 1870, one grain was represented by 12.8 minims." This represents an increased strength of only fourteen per cent. of morphine between the

tincture opii, United States Pharmacopœia, 1870 and 1880, that is, the grain dose is given in about twenty-two drops instead of twenty-five as formerly. This difference of three drops only is a less variation in quantity than would probably be made by successive attempts of the same or different persons to drop out the old twenty-five drop dose. So that I think physicians need not under *ordinary* circumstances have any anxiety as to whether it will be a tincture made according to the United States Pharmacopœia 1880 or 1870 that will be dispensed in their prescriptions. Yet it would be well, for a while at least, to write (U. S P., 1880) after the name of any pharmacopœial preparation which physicians particularly desire to be *surely* of the full strength, as what would thus be likely to be dispensed would more probably be of the proper quality, and the writing thus would show the pharmacist that the physician was observant and particular in such details. This is a much more reasonable way than writing the name of any particular manufacturer after pharmacopœial preparations, for it allows the pharmacist to put up his own or any one's make that he is ready to guarantee, but holds him to the full responsibility of that which he dispenses. He could not, however, be thus held if he put up a particular make which was ordered, even if this was not more than a quarter of the full proper strength.

In my examination of 100 samples of laudanum collected from all over this State, the pharmacopœial limits being between 1.2 and 1.6 per cent. of morphine, I have found samples containing all the way from 0.33 to 1.87 per cent. of morphine, thus one six times as strong as another, and with specific gravity varying from 0.921 to 0.997. Four samples exceeded the 1.6 per cent., and eighty-two fell below the 1.2 per cent. The average per cent. was 0.965, and the specific gravity 0.953. Forty-five samples contained about one per cent. of morphine as was required by the United States Pharmacopœia, 1870, if assayed by the modern process of United States Pharmacopœia, 1880. The best pharmacists of this city are now generally making up their tincture to the average United States Pharmacopœia standard of 1.4 per cent. morphine, or about the six grains to the fluid ounce. The ten samples of morphine salts examined have all come up to standard.

Of citrate of iron and quinine forty samples were examined, and were found to contain all the way from 3 per cent. to 14.37 per cent. of quinine, the present United States Pharmacopœia requiring 12 per cent. only, while the previous one required 16 per cent. Of these samples 82.5 per cent. fell below the present standard, two makers alone having been found to have their preparation generally fully up to standard. Of about thirty samples of quinine salts examined 28.5 per cent. contained an excessive amount of the cheaper cinchona alkaloids.

Only two out of a dozen powdered jalap samples contained the proper amount of resins, while out of ten samples each of the bromide and iodide of potassium not one came up to standard; trade absurdly demanding that the crystals should be, not translucent and colorless, and therefore *possibly* pure, but opaque and porcelain white, and therefore *of necessity* impure, with excess of alkali, which renders them unfit for use with alkaloids, syr. ferri iod., or any other like combination which might be desired.

DR. EDES remarked that by employing the more recent manufactures by Squibb the physician would obtain a much larger dose than in the earlier preparations. In the case of tincture of opium the present preparation contains fifty per cent. more opium than the former tincture.

DR. GEORGE B. SHATTUCK asked what were the poorest results obtained by analysis of laudanum and citrate of iron and quinine.

DR. DAVENPORT stated that the most common result was to find a content amounting to from one fourth to three fourths the amount required by the Pharmacopœia in analysis of tincture of opium, and in citrate of iron and quinine any amount from one third to the normal quantity.

DR. MORTON PRINCE suggested that if the firms who manufacture and dispense standard goods were made known to the profession it might be the means of protection from imposition on the one hand, and aid in driving the spurious articles out of the market on the other hand, both of which objects it would seem desirable to accomplish.

DR. C. HARRINGTON, of the Harvard Chemical Laboratory, gave a somewhat detailed account of the analyses of various articles of food under the auspices of the Board of Health, as follows: —

About three hundred samples of milk have been subjected to analysis. The milk was obtained from all parts of the State, and was secured in each instance from the regular supply furnished to customers. Milk should contain under normal conditions about thirteen per cent. solids. In some specimens the solids were present only to the extent of nine per cent. The first one hundred samples of milk and the greater part of the second and third hundreds were obtained in Boston, and of these samples more than seventy per cent. were adulterated. The milk from the western parts of the State, particularly from Berkshire County, was found to be uniformly freer from adulteration than that from the eastern counties. The poorest samples of milk were invariably those obtained from the shops and groceries in which it is sold at retail. Milk directly from the cart was always of better quality. In certain large towns the milk supply was far superior to that in certain other towns of equal population. Thus Lawrence, Worcester, and Springfield enjoy purer milk than do Lynn, Chelsea, and Somerville. In Worcester the solid constituents of milk averaged from twelve to sixteen per cent., while in ten cases which were prosecuted the proportion of solids was in none more than nine per cent.

Various articles of food were found to be adulterated in fifty per cent. of the samples. Butter was occasionally found adulterated with oleomargarine. Tea was adulterated to a greater or less extent, one sample containing twenty-six per cent. of sand. One specimen of coffee was found to contain twenty per cent of chicory. Two hundred samples of spices were examined and all were found to be bad. Of twenty-four samples of mustard only two were found to be good. Fifteen different brands of mustard in boxes were found to consist of wheat flour, and turmeric in a greater or less degree. Various samples of pepper were analyzed and found to contain chiefly only dirt. Spice mixture is found to consist mainly of similar material, and sells for forty cents per pound. Several specimens of pure olive oil from Leghorn were analyzed, and were found without exception to consist entirely of cotton-seed oil from the Providence Oil Company.

In cereals and bread no adulterations were detected. Bread contained neither alum nor copper. Some specimens contained an excess of moisture, but this can hardly be called an adulteration. Cocoa and meals, sago and tapioca were not found to be adulterated.

DR. J. C. WHITE asked the minimum standard of milk solids in cases which were prosecuted.

DR. HARRINGTON stated that no case had been prosecuted in which there was a solid content of eleven and one half per cent.

DR. WHITE alluded to a case in which no adulteration could have possibly taken place, in which the amount of solids reached only nine per cent.

In reply to a question, DR. HARRINGTON stated that none of the milk examined was rendered in any way injurious by adulteration, that nothing but the cream had been removed, and nothing but water had been added to it. Neither of these changes would make the milk directly injurious or dangerous.

MR. G. F. PIPER, attorney for the Board of Health, who was present by invitation, spoke as follows: —

Prior to the passage of the statute of 1882, entitled "An Act relating to the Adulteration of Food and Drugs," the legislation upon that subject was confined to fraudulent adulterations and adulterations injurious to health. The fraudulent conduct, or the guilty knowledge, or the fact that the adulteration was injurious to health, therefore, became elements, upon a complaint, which the government was bound to prove, and the great difficulty of proving these elements virtually made the statutes upon that subject a nullity. Very few prosecutions accordingly resulted. This form of legislation was not broad and stringent enough to reach the many cases of substitution of one article for another, or, as in the case of a drug, its manufacture below the ordinary standard of strength and purity usually adopted and recognized, or a case where some valuable constituent may have been removed and a poorer one substituted, and the many other various forms of commercial frauds existing. The statute of 1882 broadened and extended this class of legislation, its purpose being to reach all cases which the previous legislation did not reach.

In the case of drugs it adopts a standard and makes it an offense if the party selling sells an article varying from that standard, if sold under a name which carries with it a recognized standard. If the drug sold is one recognized in the United States Pharmacopœia, it adopts that standard. For instance, tincture of opium, according to the Pharmacopœia of 1880, contains 1.20 percentage of morphine. A druggist therefore who sells tincture of opium of less morphine strength than that standard is liable to prosecution.

If the drug is sold under a name not recognized in the United States Pharmacopœia, but which is found in some other Pharmacopœia or other standard work on materia medica, it would be an offense under the statute if it differed materially from the standard of strength, quality, or purity laid down in such work. And again, it would be a violation of the statute if the strength or purity of the drug fell below the professed standard under which it was sold.

In the case of food, the statute defines also what shall be deemed an adulteration; for instance, mixing any substance or substances with the article so as to reduce, lower, or injuriously affect its quality or strength; substituting any inferior or cheaper substances; abstracting any valuable constituent, or selling an article under the name of another article.

The statute absolutely prohibits the sale of any article of food or any drug adulterated within the meaning of the act.

The element of fraudulent conduct, or guilty knowledge, or criminal intent, does not enter into the offense. If the party selling violates any of the provisions of the statute he is liable to the penalty therein set forth, without regard to the question whether he knew or did not know what the article was he sold. For the protection of the public, the statute imposes upon the tradesman the most extreme caution in selling his goods. He is bound to know what he is selling. This, certainly, is no injustice, for the purchaser buying and paying for a pure article is entitled under the law to the greatest protection.

The tradesman by the exercise of proper caution can inform himself of the nature of the article sold, while the purchaser must rely, and does rely, wholly upon the good faith of the tradesman. There is every reason, then, why the burden should be placed upon the seller and not upon the purchaser.

The statute imposes the duty of enforcing the provisions of the statute upon the State Board of Health, Lunacy, and Charity. The enforcement of similar laws, for example, the laws against the adulteration of milk, and the laws against the adulteration of vinegar, have heretofore been left with local inspectors, appointed by the different towns and cities throughout the Commonwealth. This mode of enforcing a law has proved generally to be an utter failure.

The local inspector is usually some individual who has been appointed for some political service rendered, who may have no qualifications for the office, and whose only purpose and desire often are to make the greatest money's worth out of his office. The salary is usually very meagre, and generally no appropriation is made for the expense of enforcing the law. Accordingly little work is usually done and the adulterator flourishes.

The milk inspector of Boston recently testified before the Legislative Committee on Public Health that he had made six hundred examinations of milk during the past year, and thirteen persons had been convicted of selling adulterated milk. His practice was, he said, to go around the city early in the morning, carrying with him his lactometer, and placing it in the milk he in that way decided whether the milk was adulterated. It is well known that this method of determining whether milk is adulterated is very unreliable and unsatisfactory. This may to some extent account for the few prosecutions and the condition of the milk market in Boston, in which, according to the statement of Dr. Charles Harrington, chemist to the State Board of Health, ninety per cent. of the milk sold during the past year was adulterated, and badly adulterated.

The State Board of Health, Lunacy, and Charity, by reason of the qualifications of its members and its freedom from local and political influences, is more likely to be a much more efficient agency to be intrusted with this work.

In November last the State Board commenced its prosecutions. The first prosecutions were against grocers and provision dealers in Boston for selling adulterated milk, and these were subsequently followed up by others.

Ten convictions have been secured.

Complaints were entered during the same time against several parties for selling adulterated tincture

of opium, and in one case for selling adulterated citrate of iron and quinine.

The analysis of the tincture of opium sold showed the following percentages of morphine: .38, .63, .79, .72, .81, where the Pharmacopœia standard of 1880 required 1.20. They were all convicted, with one exception, and in that case the adulteration was clearly proved, but the firm prosecuted testified that the tincture was sold by a young man in their employ who had no authority to sell, his duties being not those of a salesman but pertaining to another department. This firm escaped conviction in that way.

The first prosecution for selling adulterated tincture of opium was before the Central Municipal Court of Boston, and developed the question which Pharmacopœia was the standard by which these cases should be governed, whether that of 1870 or that of 1880.

The Pharmacopœia of 1880 was not published and in use in August, 1882, when the Food and Drug Act took effect. It was accordingly contended by the parties prosecuted that the Legislature must have had in view the standard of 1870, and that these cases should be tried and judged by that standard. On this first prosecution the tincture of opium was, in its morphine strength, below both the standard of 1870 and 1880, and the judge who tried the case found as a fact that the drug was adulterated, but did not rule upon the question which standard was in force. On the next prosecution before the chief justice of that court the question was again raised and presented, and a decisive ruling was made to the effect that the Pharmacopœial standard by which the drugs sold should be judged was that which was in use at the time when the sale was made, and accordingly ruled that the standard of 1880 must govern existing cases. This ruling has been followed by the other judges of that court.

On the prosecution for selling adulterated citrate of iron and quinine it appeared that the article sold varied from the standard percentage of the quinine according to the formula of the Pharmacopœia of 1880. The parties were convicted.

A prosecution was made against a dealer in vinegar, in Somerville, for selling a vinegar as a pure cider vinegar. The statute makes it an offense to sell as cider vinegar a vinegar not the legitimate product of pure apple juice, known as apple cider.

The chemist for the government testified that in his opinion the sample sold was a cider vinegar which had been watered. The chemist who was summoned by the defendant before the trial had been given full opportunity to test the sample. Upon the witness stand he testified that he had had a large experience in the manufacture and analysis of cider and cider vinegar, but he had in his experience never seen a cider vinegar with the small amount of acetic acid and residue which this sample contained. He further testified that the sample was to him very suspicious.

The judge, contrary to all precedents, ruled that it did not appear that any criminal intent existed or any fraudulent conduct. The counsel for the government suggested that it was not necessary for the prosecution to prove either elements, that the sale itself, under the statute, was a violation of law, and that no criminal intent, or guilty knowledge, or fraudulent conduct need be shown. He replied that that would be unconstitutional.

The defendant was discharged.

This principle has been decided time and again by our supreme court, and the ruling of the Somerville court in that respect was clearly and beyond question wrong.

I have been very much surprised at the position taken by the press of Boston in reference to these prosecutions. The reporters of three of our newspapers have told me that they have received orders not to report facts in reference to these prosecutions, and that articles that have been written by them for publication have been refused publication. I had supposed that in a matter of this kind that it was the duty of the press to advocate what seems to me to be the cause of the people. The purity of food and the purity of drugs should and must be a matter of great moment and importance. The reason of this course pursued by the press of Boston we may not know, but I think we can, each one of us, very clearly draw our inferences what that cause may be.

The physician is largely interested in the enforcement of this law. When he writes his prescription it is of the greatest moment to him as well as to his patient that it shall be filled out as he has written it, and according to the existing standard. A fixed standard is absolutely necessary, and the physician and the druggist must in unison adopt that standard.

At the recent hearing before the Legislative Committee on Public Health it was testified by one who had been a defendant in one of the prosecutions for selling adulterated tincture of opium that he did not believe in the Pharmacopœia, and he would leave it to the discretion of each druggist to fill out a prescription. Comment upon such a statement is unnecessary. Let, then, the physicians of Boston give their strong moral support and encouragement to the State Board of Health, Lunacy, and Charity in the enforcement of this law, and make it an efficient law, and not a dead letter.

(To be concluded.)

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

JANUARY 7, 1884. DR. E. G. CUTLER read a paper on a case of

PROTRACTED LETHARGY AFTER THE USE OF BROMIDE OF SODIUM

by an individual having the morphia habit.[1]

DR. BUNDY said that he had a case twelve years ago where the patient took two and a half ounces of bromide of potash with similar result; the patient was unconscious for two weeks, but gradually recovered. The disease was a habit of drinking whiskey and ether, but the bromide did not cure the trouble. There was entire loss of the power of coördination, and at the end of two weeks he was moved into another house without knowing it.

DR. CUTLER mentioned one fatal case where the drug was pushed to its limit, in which the patient sank and died in one week. In this case the kidneys did not work well.

DR. EDES referred to two cases reported by Dr. Schweig in the *New York Medical Record*,[2] in which

[1] See page 246 of this number of the JOURNAL.

[2] Vol. xi., page 841.

excessive doses of bromide of potash produced similar results to those reported. Anæsthesia of the conjunctiva is rare.

Dr. Folsom had seen a case where there was much physical depression, boils, etc. After excessive doses of bromide he gave large quantities of water to help eliminate the drug. After the effect passed off there was much insomnia. For three weeks after the taking of the bromide the patient had no desire for morphia, but it returned later. After this he had an interval of five months during which he gave up the morphia, but his suffering was so great that he began using it again, and says he shall never make another attempt to break up the habit. Dr. Folsom had seen cases where bromide of potash had been given for other purposes where the torpor had lasted as long as this. It seems to vary with different persons. In epileptics the bromides sometimes do good, but sometimes harm, as in the case of a young lady who was taking fifty grains three times a day without effect on the epileptic attacks, but who was suffering from the excess of bromide. When pushed to excess it may cause a mild form of silly mania.

Dr. Channing had seen cases of morphia habit where large doses of bromide of potash had been used, but without good result, and he considered the excessive doses as dangerous. He also thought chloral was not of much service in these cases.

After the shock of the bromide of potash passes off there may be a temporary relief, but the desire for opium returns. The treatment must be largely moral, and must depend on the patient. It is best to break off the opium as rapidly as possible, best in one week. Then bromides may be used occasionally for sedative effect.

Dr. Edes mentioned Laport, Indiana, as a headquarters for "morphia cures."

Dr. Davenport said that all the so-called morphia cures manufactured there contained opium, often in solution in glycerine, and colored with aniline. He spoke of the increase in the strength of the tincture from nine in one hundred to ten in one hundred, but said that the increase was not great enough to produce much effect in ordinary doses. He mentioned the assays which he had been making for the Board of Health of the strength of the tincture of opium sold in the shops. Variations had been found all the way from one quarter of the standard strength to fifty per cent. over this standard, but in the latter case a single druggist had made a mistake in compounding.

Dr. C. H. Williams read a paper on Intraocular Changes in Cases of Cerebral Tumor.

Dr. E. H. Bradford reported

A SUCCESSFUL CASE OF AMPUTATION AT THE HIP-JOINT.

The patient was a boy eight years old, whose hip-joint had been excised in July by Dr. A. T. Cabot for caries. The femoral shaft was found so extensively diseased that amputation was advised, but the parents' consent could not be obtained, and the patient's condition became gradually worse from long-continued diarrhœa. This, however, stopped in October, and in November amputation at the hip-joint was performed by Dr. Bradford. No shock followed the operation, and the boy steadily improved, at the present time, three months after the operation, having nearly doubled in weight, and being able to walk about with crutches freely. Sinuses persist from the pelvic disease, but the boy's condition is such as to justify the belief in a cessation of the carious process. Dr. Bradford mentioned that there were no less than forty-two methods described for amputation at the hip-joint. The chief anxiety is in regard to hæmorrhage. The method employed was suggested by Dr. C. B. Porter, who himself has employed it. The amputation is performed in two steps, — first an amputation of the femur as high up as is practicable, using Esmarch's bandage and tourniquet to control the bleeding. The vessels are then tied, and there is no fear of hæmorrhage while performing the second step, namely, the removal of the head and upper part of the shaft, which is done by a lateral incision and subperiosteally. The difficulty in disarticulation in the case reported was slight. Only a portion of the head remained. Where this is not the case disarticulation, as for excision, can be performed before the amputation is begun.

Dr. Cabot said the same operation might be applied to the shoulder-joint, for patients are often much benefited by the removal of these diseased parts and the constant drain on the system caused by their suppuration.

Recent Literature.

Hints on the Drainage and Sewerage of Dwellings. By William Paul Gerhard, Civil Engineer. New York: Wm. T. Comstock, 6 Astor Place. 1884.

This excellent work of three hundred pages contains much valuable information for all who are interested in the sanitation of dwelling-houses.

Physicians, householders, and plumbers will find in it many useful hints. The chapters on Traps, Plumbing-fixtures, and on the Removal and Disposal of Household Waste are especially full and well illustrated. The defects of various contrivances are clearly indicated, and modes of remedy suggested. The book contains nearly three hundred illustrations, which are sufficiently shorn of extraneous detail to render them intelligible to the non-professional reader.

Handbook of Eclampsia. By E. Michener, M. D. and Others. Philadelphia: F. A. Davis, Att'y, 1883.

This sextodecimo book of sixty-eight pages contains notes of forty-four cases of puerperal eclampsia, being "all which have occurred during the present century within a radius of several miles around Avondale, Chester County, Pennsylvania, so far as can be ascertained." The ostensible object of the book is the advocacy of blood-letting in all cases of puerperal eclampsia without discrimination.

Deference to the age of the chief author, who was an interne in a Philadelphia dispensary in 1816, and whose views of the pathology and ætiology of eclampsia do not conform to those held by modern authorities on this subject, forbids that freedom of criticism which the book should otherwise receive: and we will simply say that while we believe in the efficacy of blood-letting in certain selected cases, we do not believe in its indiscriminate use, especially in the cases of eclampsia

occurring post partum. We cannot recommend the manual even "to the young and isolated physician" to whom it is inscribed; but we heartily approve of the advice given on the last page that "for the last three months of her term" a pregnant woman "should be kept under the observation of a competent medical adviser." C. M. G.

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REPORTS ON CHOLERA FROM SURGEON-GENERAL HUNTER AND DR. ROBERT KOCH.

THE fifth cholera report of Dr. Robert Koch to the German government, this one from Calcutta, and the report of Surgeon-General Hunter to the British Foreign Office on cholera in Egypt, the essence of which is contained in a paper read by him before the London Epidemiological Society on January 9th last, have again turned medical attention to the discussion of this disease. Dr. Koch's report, which was first published in the *Deutsche Med. Wochschr.*, February 14th last, and in the Berlin daily papers of the same date, is being republished and commented on by the medical periodicals, and Sir W. G. Hunter's remarks were made the special subject of debate at the adjourned meeting of the Epidemiological Society held February 13th.

There is one thing in common between the report of the German and that of the English investigator, each seems pretty well satisfied that he has found what he went out to seek, and the results in each case confirm the investigator in the preconceived views with which he departed on his mission. Surgeon-General Hunter is probably but little more certain to-day that cholera is endemic in Egypt than he was when first commissioned by government to ascertain the cause of the outbreak last June; and Dr. Robert Koch, notwithstanding his really scientific cast of mind and methods of work, would probably have been more surprised and disappointed than he was prepared to be had not the Imperial German Commission confirmed and enforced, wherever cholera was actually to be found, the results of the study in the Berlin laboratory on the cholera intestines imported from India.

The two reports have at least one other thing in common, namely, that whatever coloring they may lend or appear to lend to the views advocated or expressed by the respective writers, neither the one nor the other can impress the impartial reader, of whatever nationality, — and we are sorry the influence of nationalities should be felt in such questions, — as by any means conclusive of the correctness or value of the positions assumed.

The similarity in the attitudes of the two investigators toward the common subject, cholera, ceases with their both having preconceived views confirmed by their investigations. Hunter asserts that cholera is a non-contagious disease (typhoid fever may also be called non-contagious); hence he disbelieves in the existence of a specific germ, and consequently in the necessity of importation, and therefore seeks for, and believes he finds, the cause and origin of epidemic outbreaks in the condition of the country itself, the disease being endemic. Telluric influences foster the disease as an endemic, and favorable climatic or meteorological conditions light up an epidemic. What he learned in Egypt convinced him that cholera had been continuously present there in one form or another at least since the great epidemic of 1865. The following curious extract from Lord Bacon concerning the climatic and telluric peculiarities of Egypt was unearthed for the benefit of Dr. Hunter: —

"It is recorded, by competent observers, that if you take earth from the side of the Nile, and protect it from wet or waste, and weigh it every day, you will find that it remains always of the same weight until June 17th, when it begins to increase in weight, and continues to increase in weight during the whole time that the river is rising. This can be due to nothing but the air, and this is the more extraordinary, because it has been observed that just at that date it is the habit of grievous plagues to make their appearance at Cairo."

The Surgeon General had previously expressed himself on the point thus: —

"The frequency with which atmospheric phenomena have been observed in connection with outbreaks of cholera leads to the conclusion that they stand in close relation one to the other. Whether that be as cause and effect is perhaps hard to say. It is probable that it is to a combination of certain conditions of a cosmo-telluric character, of air, soil, and water (filth, as in Egypt, being a powerful factor), that the development of an epidemic is due. Given, as in Egypt, endemic centres, the peculiar atmospheric state noticed would probably act as an exciting cause in the immediate production of the epidemic outbreak."

The German Commission went out, not to find the cause of any one outbreak of cholera, but to study the disease and to find its ultimate *causa causans*. Koch evidently regarded the disease *à priori* as specific — whether contagious in any degree or not — exhibiting a specific germ, whose habitat was probably the bowel; this may be fairly presumed from his general attitude toward other epidemic diseases, and from his investigations at the laboratory of the Sanitary Bureau at Berlin. Instead of studying the Egyptian *circumfusa*, Koch devoted himself to the *dejecta* and especially, among the internal organs, to the bowel. The limited Egyptian experience (twelve cases of cholera, and ten autopsies) confirmed the observations made at home in regard to the presence of a certain *bacillus* in the

walls of the small intestine without affording satisfactory proof of its specific character. The last and fifth report of Koch, dated Calcutta, January 7th, is based upon a further study of eight cases of cholera, and nine autopsies. The bacillus has continued a constant feature, and has been successfully isolated and cultivated, and its distinguishing characteristics carefully noted. Furthermore this bacillus has not presented itself except in the intestinal contents or walls of cholera victims.

The report offers no further evidence as to the relation of this micro-organism to cholera, and, though vague on that point, it is pretty plain that attempts to reproduce the disease by inoculation still remain unsuccessful. It is therefore in order to restrain excessive enthusiasm in regard to the "cholera-bacillus" of the small intestine, no less than it was in regard to the cholera microbion of the blood reported by the French Commission in Egypt, which Koch now with fine irony suggests in his report is probably nothing more nor less than the well-known "blood-plates," figured as far back as 1872 by Lewis and Cunningham in a report on microscopical and physiological researches concerning cholera.

It is not probable that the Germans will allow themselves to abdicate their judgment as to the bearing of Koch's observations, and we need not be overhasty to immolate ours in this country; the English are criticising Hunter's position very judicially; but it is pretty safe to predict that both Koch and Hunter will be ruled out of court by French scientists.

ACTINOMYCOSIS OF THE PERITONÆUM AND ABDOMINAL ORGANS IN MAN.

Five cases of actinomycosis affecting the peritonæum and abdominal organs are reported from Vienna by Dr. Adolf Zemann,[1] assistant at the Pathological Institute there. The characteristic fungus colonies were found in all cases both in the purulent contents of the abscesses and in the tissues of the affected parts. The number of previously reported cases is small. Ponfick collected sixteen in all of his own and others, and these were published in his monograph on the subject, which appeared in 1882. These cases Ponfick divided into two groups, those which recovered and those which were fatal. The former group consisted of cases where the malady made its first appearance on the jaws, — preferably on the lower jaw, — and spread downward along the neck to the clavicle. The second group of cases comprised those in which the process announced itself by pains in the limbs or, more generally, along the spinal column and neighboring parts of the back, succeeded by pneumonia or pleuro-pneumonia of the left lower lobe. In a few cases these pains precede a prevertebral gathering which becomes a psoas abscess.

These five cases now reported seem therefore to be, not only a considerable addition to the existing observations of a but little-known pathological process, but also to enlarge the clinical description of the disease. Some of these cases ran their course with fever and others without. Zemann concludes from his study of them that the important point in the diagnosis of actinomycosis is the discovery of the pathognomonic fungus. Apart from such identification the disease can neither be diagnosticated from the part affected nor from the course which it runs, since the process may be febrile and acute, or almost without fever and chronic; in which latter case it manifests itself as an induration, as a chronic inflammation of serous membranes, as an inflammation in the bones or periosteum, or as an inflammation attacking the internal organs. All of which is demonstrated by the varied points from which the fungus gains access to the body, and by almost innumerable complications attendant on its presence.

Zemann's cases certainly tend to show that by no means so simple a picture as that given in Ponfick's monograph will suffice to represent actinomycosis.

[1] Wien. Med. Jahrbuch., 1883, page 477.

THE REFLEX EFFECT OF DEALING IN "FUTURES."

There can be no doubt that the character of the habitual mental occupation exerts a considerable influence upon the physical condition of men. That a very high degree of intellectual activity is not inconsistent with excellent general health and long life is a fact familiar to common observation, and is confirmed by published mortality records, from which it appears that the longevity of the members of the so-called learned professions is hardly exceeded by that of any other class in the community. It seems to be also well established that an alternation of the character of one's studies often is equivalent to a positive recreation. Thus we have recently met with the statement of an Englishman, eminent at once in the law and in literature, to the effect that after what would be a fair day's work in the former field he turned to his historical writing with a feeling of actual refreshment, even greater than that to be obtained from mental inactivity. Thus dividing his time he was able to accomplish, without fatigue, fifteen hours' work per day.

The amount of actual labor of which the human mind and body are capable under well adjusted conditions is certainly very great. In all men of affairs of whatever calling, it is of course unavoidable that anxiety (whose exhausting tendencies are generally admitted) should to some extent be present. But it seems to be the fact that so far as the uncertainty has to do with affairs which are controlled by one's own powers it is less wearing than when such affairs are independent of one's own control, and entirely the sport of extraneous chance. Thus while the conductor of a legitimate business project is, perhaps, working under a higher pressure than the student of a pure science, his calling is yet more favorable to longevity than that of the stock operator. And, indeed, it is, perhaps, not unlikely that the great stock manipulators, some of whom have certainly reached a

green old age, are more favorably situated in this respect than the smaller speculators, in that the former are really able to a considerable extent to make the market, and that to them Fortune is not altogether a blind goddess, but gives a knowing wink as she turns her wheel. Thus in judging of the effects of these occupations one should remember that even as many physicians are not given to dosing themselves, so some stock brokers do not themselves speculate. To buy and sell for the account of others, even to collect a wide "margin" from one's client, do not involve any personal risk-taking. If business is brisk the pool seller may be equally content whichever horse wins, and we believe that in certain other games of chance, however the cards turn, the "bank" makes its earnings without interruption. There may, then, be a class even of professional gamblers who while sitting in the very vortex of the giddy whirl are quite at rest in their own minds. Not so with those who are fairly in the current.

Of the moral effect of gambling, of course in this connection we have nothing to say. Its disastrous influence upon the mental and physical nature of its votaries was emphasized in a recent lecture by Dr. Crichton Browne, of England, on the Gospel of Recreation. Those amusements which depend for their zest upon the element of chance certainly have a strong attraction for the average man, as is shown by the frequency of betting on all sorts of subjects. The sporting papers and the sporting column of the daily press add fuel to this flame, which needs little to keep it alive. Dealings in futures are made easy by the widely published quotations of all sorts, and despite the heavy chastisement which has recently been inflicted on hundreds of small operators by the merciless depreciation of values, yet the public is still ready at every opportunity, whether at a club table, in politics, in athletics, or even over the great staple commodities of life, such as cotton, petroleum, or grain, to bet on events yet to occur. As a producer of intense emotional excitement perhaps no other amusement has the power of gambling, and it requires no demonstration that profound and repeated emotional excitement is a frequent precursor of nervousness, sleeplessness, and insanity, even if we do not go to the extent of Dr. Browne in attributing to this cause "numerous cases of dyspepsia, . . . heart disease, diabetes, paralysis, and apoplexy."

Dr. Browne, alluding to the effects of a vice or habit on the faces of those addicted to it, and quoting Mr. Francis Galton to the effect that the sight of a bundle of photographs of criminals will excite from their ugliness a sense of aversion or disgust in a spectator, says: "But the next best place to a prison in which to see the English physiognomy at its coarsest and worst is the platform of a London railway station on the day of a suburban race meeting, when the special trains are just starting. There may be seen a pushing, chaffing crowd of betting men, or bookmakers, and their dupes, with rascality stamped on their features in a way that cannot be matched in any other spontaneous assemblage of their countrymen. In almost every face may be discerned cruelty and greed, in many be recognized a hideous mixture of imbecility with low cunning, and in a few may be caught glimpses of infra-human or mere animal rapacity. There may be seen faces that are congenitally and radically bad, and with them others that bear the faded traces of better things almost blurred out, perhaps by the blotches of dissipation and the hard lines carved by this soul-destroying vice." A glimpse by Bulwer-Lytton, when a young man, in Paris, of his own face in a mirror after a night of successful gambling, was such a revelation to him, in its haggard and sinister lines, of the effect that gaming was exerting on his whole nature that he thenceforward abandoned it completely.

There is ground for the physician and hygienist as well as the moralist to discountenance that general devotion to hazard which, in public and private, characterizes so much of the city life of the day.

MEDICAL NOTES.

— A correspondent of the *Medical and Surgical Reporter* (March 1st) narrates a case where it seems tolerably certain that scarlet fever was transmitted by means of a letter. At least there is much less room for doubt than in many cases where such a cause is popularly assigned. The outbreak was in a country house half a mile distant from the nearest neighbor, and the family had occupied the house for three years; the children had not been away from the farm for two months, and no one had been in the house who had had the fever or been where it was. In fact, no case of the disease had been known of or heard of by the physician for some months anywhere in the county. It appeared, however, that the mother had received a letter from her brother only a short time before, stating that her brother's family had just lost a child with scarlet fever. This letter contained a photograph. The letter was received only seven days before the first child was taken sick, and the children all handled the letter and picture.

— The Faculty of the New York Polyclinic have been obliged by the increasing success of that institution to provide larger room, and have therefore purchased the extensive property heretofore occupied in part by them, which will be remodeled and fitted with amphitheatres for clinical work, well-furnished laboratories for chemical, histological, and pathological studies, and rooms for operative surgery and demonstrations in surgical anatomy. These increased facilities, taken in connection with the hospital appointments of the Faculty, enable the Polyclinic to offer great attractions to those members of the profession who wish to supplement their undergraduate studies while remaining in this country.

— The Swedish physician, Santesson, relates in *Hygiea* that he was called to a young man of twenty-five with an abscess in the left iliac region. Examining him M. Santesson found the right side of the scrotum empty, and in the left side a hard, round

body, of the size of a musket ball, covered by the skin, but no trace of cord or testicle. A linear cicatrix on each side of the median line made him suspect castration. On interrogating his patient he learned that the young man, when seventeen or eighteen years old, had obeyed the Scriptural direction, If your right eye offends you, pluck it out, and had, with a planing iron, made an incision in the skin of the scrotum, extracted the testicle, and cut the cord on both sides. Local applications of cold water arrested the hæmorrhage, and he recovered in about three weeks. Certainly it seemed to him disagreeable to live with an empty scrotum, and fearing that he would gain heaven later than he thought he decided upon a new operation. With the chisel he made an incision in the scrotum on the left side, and introduced into the wound a glass ball, which served as a testicle, and relieved his disagreeable void. The wound healed slowly. M. Santesson extracted the ball, and presented it to the Society of Medicine of Stockholm.

— Lecturers on First Aid to the Injured and kindred subjects, which have become so popular of late, do well to translate all technical terms which they may have occasion to use completely into the vernacular, otherwise they may be confronted at their examinations by such startling statements as this, which we learn from an English contemporary to have been actually rendered on such an occasion: "Bleeding from the nose is neither *Artillery* nor *Venus*, it is *Caterpillary*."

— Whatever may be said (and there is much) in favor of the requirement of some compensation from the beneficiaries of a hospital, it is worthy of remark that at Guy's, which for various reasons is a most conspicuous example of the inauguration of the commercial system, the motto of the founder was *dare quam accipere*. In view of the change of policy it would seem appropriate to make a slight change in this doctrine of the founder so that it should read *accipere quam dare*.

— A female child, aged six, who was brought to one of the London hospitals for ringworm was noticed to have a patch just above the middle of the forehead, where the skin was white, and the lock of hair growing from it was almost, if not quite, white. The mother had a precisely similar condition, and said that the lock had, at one time, been as long as the rest of her hair, but she had now cut it short. She also said that it was hereditary in her family, having occurred in two of her sisters and one brother, in her father and her grandfather, and that one of her sisters had four children similarly affected, all girls.

— French Fun: Dr. B., after having bought a lot in the Montparnasse Cemetery, went to the marble worker to order the tomb. After the details were arranged the marble worker said: "Monsieur did well to select this cemetery, it is so quiet; and then Monsieur le Docteur must know a good many people here."

— A writer in the *Lancet* describes the use of a Hodge pessary in the treatment of a fracture of the lower jaw at the symphysis with external wound of two inches in length. The desideratum was an apparatus which should immobilize the jaw and yet allow of the dressing of the wound. The pessary was bent so as to allow the chin to protrude through its ellipse, one bar being moulded so as to support the fracture anteriorly, the other from below. Tapes were sewn to the rounded ends of the pessary for securing it.

— Rev. Daniel Waldo, a graduate of Yale in 1788, who died in 1864 at the age of one hundred and two, gave as one of the rules of life which he had acted upon, and which he believed had enabled him to live so long, "Never allow yourself to fall into a fit of anger. One storm of angry passion will cut short your life more than an ordinary run of fever."

— A very unusual thermometric record for the "temperate" zone is announced from New South Wales. The unfortunate locality is the town of Bourke, some 500 miles from Sidney. It is situated on an immense plain at about the sea-level, separated from the coast by a chain of low mountains. The temperature, as published by the government meteorologist at Sidney, showed an average at the hottest period of the day for the first fifteen days of 1884 of 110.6° F. The lowest figure for any of the days was 103.5° F., and the highest 122° F., which was reached two days in succession.

MEDICO-LEGAL NOTE.

— The following is stated in the Maryland *Medical Journal* on the authority of Mr. Willoughby N. Smith of the Baltimore bar, and Lecturer on Medical Jurisprudence in the College of Physicians and Surgeons, as being the state of the law in the United States with respect to the sanctity of communications imparted in confidence to a physician by a patient: —

In the absence of any statutory provision to the contrary, it is well settled that a physician or surgeon may be *compelled* to disclose any communication made to him in professional confidence. — *Stephens' Digest of Evidence*, Art. 117.

The States which have enacted statutes changing this rule of the common law are the following: Wisconsin, New York, Michigan, Iowa, Minnesota, Missouri, Ohio, Indiana, and Nebraska.

The statute of Wisconsin provides that "no person duly authorized to practice physic or surgery shall be *compelled* to disclose any information which he may have acquired in attending any patient in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon." — *Wisconsin Revised Statutes*, Sect. 4075.

The statutes adopted in New York, Michigan, Minnesota, Missouri, Ohio, Indiana, and Nebraska, provide *either* that a "person duly authorized to practice physic or surgery" shall not be "competent" or that he shall not be "*allowed*" to make the disclosure. *But* by the statutes of Iowa, Indiana, and Minnesota such testimony "may be received with the consent of the patient" in all cases, and in Minnesota the prohibition, in the absence of such consent, is confined to civil cases: the "regular physician or surgeon" may be

compelled in that State in criminal cases to disclose communications reposed in him in confidence by a patient while in actual attendance upon the patient in the capacity of medical adviser.

Correspondence.

SOME SUGGESTIONS UPON CEREBRO-SPINAL MENINGITIS.

MR. EDITOR, — The paper upon Cerebro-Spinal Meningitis by Dr. Mason, in the JOURNAL of February 7th, was of special interest to me from the fact that the *first* and many of the succeeding cases that occurred during the epidemic mentioned by Dr. Sargent came under my care.

I will go no further than to give the treatment that was found the most successful, namely, to purge drastically with salts. If the purge was omitted over twenty-four hours the patient became unconscious, with a tendency to convulsions. As soon as the bowels were moved freely these symptoms disappeared.

In a case that occurred some months after the epidemic had apparently subsided a different mode of treatment was adopted in consequence of the disease having advanced to the convulsive stage.

A little girl, aged six years, vomited in the morning. I was called soon after. She could hardly be said to be sick, yet something in her appearance reminded me of my former cases. I cannot describe it better than by saying she did not seem to comprehend any question that was asked her. Yet her mother would not admit that this was unnatural, attributing it to my being a stranger.

On my visit the next morning this peculiarity was, I thought, more marked; still the mother would not admit that there was anything unnatural. Soon after my visit she became convulsed, and as I was not sent for, found her so on my visit at night. At this time her pulse was a mere tremor. My first effort was to stop the convulsions, as she would soon die for lack of respiration. As this was before the use of anæsthetics, my reliance was upon opium.

My principal object in giving the treatment in this case is to show that if a medicine is given which is adapted to control the symptoms for which it is given it can be pushed until the object is attained, without its ultimate effects being manifest.

To control the convulsions I dealt out three grains of sulphate of morphine in six powders. I inquired of the mother if she had any laudanum; she brought out a two-ounce vial full. Dr. Jewett, the prominent temperance lecturer, lived opposite, and kindly offered to take charge of the patient during the night; therefore I am confident the medicine was given as directed. My directions were to give one of the powders of morphine every half hour until it controlled the convulsions; if the morphine did not do it then follow it with a teaspoonful of laudanum every half hour. It will be remembered that this was for a child six years old.

On my visit early in the morning I found the child had taken all the morphine and all of the laudanum, yet had a slight tremor of the facial muscles; not a symptom of the ultimate effects of the drug could be discovered, no change in the respiration, no contraction of the pupils. She had no further manifestation of the disease, except the effect of the deposit of pus upon the membrane of the brain. She was as a new-born infant, and the change in her was as from infancy to childhood, having to learn everything anew.

HENRY G. DAVIS, M. D.

NEWTON, MASS.

Miscellany.

LIQUOR LICENSES IN BOSTON.

THE recent action of the Police Commissioners of Boston in increasing the price of the liquor licenses is supposed to be due in part to the influence of the Law and Order League, and undoubtedly is in accord with general public sentiment as reflected in the daily press. The amount to be collected for the liquor licenses is left within certain limits to the local board, the statute providing, for instance, that the innholder's license (first class) shall be not less than $100 nor more than $1000 per year. Under the former rules the amount was fixed at $300, but is now increased to $600. This schedule (A) applies to about thirty hotels in the city proper. Another schedule (B) has been established for hotels outside the old city limits, also numbering thirty, and its fee is $350. These licenses all convey the right to sell all kinds of liquors at all hours. The other classes of licenses, more or less restricted as to the kinds and amounts of liquor to be sold, are held by common victualers, brewers, grocers, etc., and have all, without exception, been increased in price, the increase varying generally from twenty-five to fifty per cent. Only the druggists' licenses, which are fixed by statute at $1, remain unchanged.

The extent of the change may perhaps be best realized when it is said that it is estimated that the income from licenses in the city during next year at the new rates will amount to $550,000, as against about $310,000 for the current year. This is supposing that the number of licenses remains as at present at about 2800.

POISONOUS WALL-PAPERS.

As the result of government inquiry, concerning foreign legislation or municipal enactment having for its object limitations, restrictions, or safeguards in the manufacture, use, or sale of arsenical and other poisonous colors in the tinting of wall-papers, textile fabrics, and other industrial decorative purposes, the *British Medical Journal* reports that the German Imperial law, which supersedes all local legislation, is by far the most complete, and has served as a basis for those of Denmark and other countries; the Austrian laws are very satisfactory, and probably would be more applicable to the circumstances of Great Britain. In accordance with a suggestion of the Board of Trade, further special inquiries have been made by her Majesty's representatives abroad on the subject of the customs regulations affecting the importation of textile fabrics and wall-papers, and the result of such inquiries has been to show that no special customs regulations or restrictions exist having for their object the detection of poisonous substances employed in coloring these articles imported into the undermentioned countries: Baden, Bavaria, Belgium, Denmark, France,

Germany, Greece, Netherlands, Portugal, Roumania, Saxony, Servia, Spain, Switzerland, United States, and Würtemberg. In Austria there are certain customs restrictions which will probably be made more stringent. In Italy the new customs tariff, approved by royal decree of August 9, 1883, enacts that goods which the competent authorities shall decide to be dangerous to the public health shall be destroyed or sent back at the cost of the importer. In Sweden and Russia elaborate instructions are in force.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 1, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	628	233	16.48	17.77	2.08	5.92	2.74
Philadelphia	927,995	360	125	14.56	16.52	1.12	7.00	2.52
Brooklyn	644,526	199	80	15 09	15.59	2.01	5.53	3.52
Chicago	632,100	186	87	20.52	10.26	1.62	6.58	4.32
Boston	423,800	171	48	15.66	14.50	2.90	6.38	1.74
Baltimore	408,520	139	61	15.12	16.56	1.44	4.94	.72
St. Louis	400,000	137	47	16.79	10.22	2.19	5.84	4.38
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	115	29	18.14	17.40	4.35	1.74	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	76	35	14.52	17.16	—	2.64	5.28
Pittsburg	180,000	75	30	10.64	9.31	—	6.65	2.66
Milwaukee	142,400	45	20	17.77	2.22	—	6.66	4.44
Providence	119,405	42	9	11.90	21.12	4.76	4.76	—
New Haven	62,882	20	5	5.00	10.00	—	—	—
Nashville	54,400	17	9	—	5.88	—	—	—
Charleston	52,286	26	8	—	15.40	—	—	—
Lowell	71,447	30	16	27.77	13.33	10.00	—	—
Worcester	69,442	26	11	19.20	11.55	3.85	11.55	—
Fall River	62,674	14	3	28.56	28.56	—	—	—
Cambridge	60,995	16	5	18.75	18.75	—	—	—
Lawrence	45,516	19	5	15.78	31.56	—	—	5.26
Lynn	44,895	11	3	18.18	18.18	—	—	—
Springfield	38,090	—	—	—	—	—	—	—
Somerville	31,350	7	1	—	28.56	—	—	—
Holyoke	30,515	12	4	8.33	8 33	—	8.33	—
New Bedford	30,144	2	0	50.00	50.00	—	—	—
Salem	29,503	8	0	—	50.00	—	—	—
Chelsea	24,347	8	3	37.50	—	—	12.50	—
Taunton	22,693	6	3	16.66	16.66	—	—	—
Gloucester	21,400	6	3	—	16.66	—	—	—
Haverhill	20,905	7	4	14.28	14.28	—	—	14.28
Newton	19,421	6	0	—	—	—	—	—
Brockton	18,323	5	1	—	20.00	—	—	—
Malden	15,273	3	1	33.33	—	—	33.33	—
Newburyport	13,947	9	1	—	11.11	—	—	—
Fitchburg	13,433	1	0	—	—	—	—	—
Seventy-one Massachusetts towns	233,167	77	14	2.60	15.60	—	2.60	—

Deaths reported 2509 (no reports from Cincinnati and Buffalo): under five years of age, 904: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 297, consumption 386, lung diseases 308, diphtheria and croup 57, diarrhœal diseases 43, scarlet fever 60, typhoid fever 32, measles 21, puerperal fever 19, malarial fevers 18, whooping-cough 14, erysipelas 14, small-pox four. From *typhoid fever*, New York eight, Chicago seven, Philadelphia six, Boston, New Orleans, and Lowell two each, Baltimore, St. Louis, District of Columbia, Pittsburg, and Providence one each. From *measles*, Baltimore seven, New Orleans five, New York and District of Columbia three each, Philadelphia, Lawrence, and Taunton one each. From *puerperal fever*, New York and Chicago three each, Brooklyn, Boston, St. Louis, and Milwaukee two each, District of Columbia, Lowell, Cambridge, New Bedford, and Chelsea one each. From *malarial fevers*, New York seven, New Orleans four, Brooklyn three, Chicago and St. Louis two each. From *whooping-cough*, New York four, Philadelphia, Boston, and Baltimore two each, Brooklyn, Chicago, St. Louis, and New Haven one each. From *erysipelas*, New York seven, Philadelphia and Brooklyn two each, Chicago, Boston, and Baltimore one each. From *small-pox*, New Orleans three, Philadelphia one.

In 71 cities and towns of Massachusetts, with an estimated population of 1,299,412 (estimated population of the State 1,955,104), the total death-rate for the week was 18.00 against 16.72 and 16.28 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending February 16th, the death-rate was 20.1. Deaths reported 3367: acute diseases of the respiratory organs (London) 334, whooping-cough 120, scarlet fever 79, measles 77, diarrhœal diseases 44, fever 40, diphtheria 39, small-pox (Sunderland 10, Birmingham three, London two, Liverpool one) 16. The death-rates ranged from 11.8 in Portsmouth to 25.8 in Sunderland; Leicester 16.5; Leeds 17.7; Birmingham 17.8; Blackburn 17.9; Bradford 19.4; London 19.8; Birkenhead 21.2; Sheffield 21.7; Manchester 22.8; Liverpool 24.9. In Edinburgh 18.2; Glasgow 25.4; Dublin 31.4.

For the week ending February 16th, in the Swiss towns, there were 40 deaths from consumption, lung diseases 35, diphtheria and croup 13, whooping-cough 10, diarrhœal diseases 10, scarlet fever four, typhoid fever two. The death-rates were, at Geneva 18.3; Zurich 23.6; Basle 20.2; Berne 23.3.

The meteorological record for the week ending March 1st, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
Feb.–March, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 24	30.192	18	24	11	70	73	68	70	NW	NW	NW	20	14	3	C	C	C	—	—
Mon., 25	30.228	27	31	18	84	77	100	87	NE	NE	E	5	14	10	O	F	S	—	—
Tues., 26	29.813	32	34	30	100	100	100	100	NE	NE	N	13	16	5	S	S	S	—	—
Wed., 27	29.788	33	41	26	94	73	78	82	W	W	SW	2	11	6	O	F	F	—	—
Thurs., 28	29.233	28	34	20	94	94	70	86	E	NE	W	10	14	26	S	S	O	—	—
Fri., 29	29.376	8	21	3	72	61	85	73	W	W	W	26	30	20	C	O	C	—	—
Sat., 1	29.744	12	20	4	76	70	72	73	W	W	W	18	14	10	C	C	C	—	—
Mean, the Week.	29.767	23	34	3				70										48.25	1.49

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OBITUARY.

DR. C. M. LORD, of Washington, one of the most respected and skillful physicians of the national capital, is dead. He resided for many years on Capitol Hill, and was well acquainted with most of the distinguished men of his time. His personal and social qualities gave him wide popularity. He was born in Troy in 1840, and graduated at the University of Pennsylvania. He was a surgeon in the Union Army and Navy during the war, and was for a time in charge at the Old Capitol Prison. For fourteen years he was surgeon at Providence Hospital.

CORRECTION FROM BALTIMORE.

MR. EDITOR, — Allow me to make a correction in my letter of the 28th ult., published in the JOURNAL for March 6th. Page 237, line 17 from bottom, should read "His opinion *is the more important*," instead of "*has the more weight*," as it was not the intention of your correspondent to attach the greater weight to Dr. Billings's opinion *because* it was *opposed* to that of Dr. Chancellor. I hope this may be corrected at once, lest it may give offense where none was intended. B.

BALTIMORE, *March* 8, 1884.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MARCH 1, 1884, TO MARCH 7, 1884.

PERIN, GLOVER, lieutenant-colonel and surgeon, medical director, Department of Dakota. Leave of absence extended twenty days. S. O 23, headquarters Division of the Missouri, March 5, 1884.

BILL, J. H., major and surgeon. Granted leave of absence for one month. Paragraph 1, S. O. 20, headquarters Department of the Platte, March 3, 1884.

BAILY, J. C., major and surgeon. Granted leave of absence for one month, to take effect on or about March 1, 1884, with permission to apply to the Adjutant General of the Army, through division headquarters, for an extension of three months. S. O. 24, headquarters Department of Texas, February 26, 1884.

BACHE, DALLAS, major and surgeon. Leave of absence extended seven days. Paragraph 1, S. O. 43, headquarters Department of the East, March 5, 1884.

STEPHENSON, WILLIAM, first lieutenant and assistant surgeon. Ordered to Fort Niobrara, Neb., for temporary duty, on completion of which to return to his station, Fort Omaha, Neb. Paragraph 4, S. O. 20, headquarters Department of the Platte, March 3, 1884.

FISHER, WALTER W. R., first lieutenant and assistant surgeon. Assigned to duty at the Presidio of San Francisco, Cal., from 18th inst.

POLHEIMER, A. S., first lieutenant and assistant surgeon. Assigned to duty at Fort Winfield Scott, Cal., from 18th inst. S. O. 23, paragraphs 1 and 2, headquarters Department of California, February 21, 1884.

PHILLIPS, JOHN L., first lieutenant and assistant surgeon Assigned to temporary duty at Fort Warren, Mass. Paragraph 2, S. O. 39, headquarters Department of the East, February 28, 1884.

BENHAM, R. B., first lieutenant and assistant surgeon. Relieved from duty at Fort A. Lincoln, D. T., and ordered to Fort Sisseton, D. T., for duty. Paragraph 1, S. O. 22, headquarters Department of Dakota, February 26, 1884.

RHODE ISLAND MEDICAL SOCIETY. — A quarterly meeting of the Society will be held in Lyceum Hall, 62 Westminster Street, Providence, on Thursday, March 20, 1884, at ten A. M. Papers will be read by Dr. N. O'D. Parks on Topical Cardiac Blistering in the Treatment of Acute Rheumatism, and Dr. Herbert Terry on The Treatment of Puerperal Fever.

GEORGE D. HERSEY, *Secretary*.

ANNUAL MEETING OF THE SANITARY COUNCIL OF THE MISSISSIPPI VALLEY. — The sixth annual meeting of the Sanitary Council of the Mississippi Valley will be held in the city of Memphis, Tenn., on Friday, March 21, 1884, instead of Wednesday, the 19th, as previously announced.

DEATH. — Died, at Groveland, Mass., March 7, 1884, Morris Spofford, M. D., M. M. S. S., aged fifty-five years.

BOOKS AND PAMPHLETS RECEIVED. — House Drainage as Constructed by the Durham House Drainage Company of New York. By William Paul Gerhard, Chief Engineer Durham House Drainage Company. New York. 1884.

Proceedings of the Naval Medical Society. Vol. I. No. 6. Washington. 1884.

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Original Articles.

ON THE USE OF FORCE IN THE TREATMENT OF RESISTANT CLUB-FOOT.

BY E. H. BRADFORD, M. D.

It is certainly desirable to place in the hands of the general surgeon a method by which obstinate, relapsed, or half treated cases of congenital talipes equino-varus may be cured without the expenditure of a great amount of time or the trouble of a great amount of special detail. This is particularly needed in the service of a large general hospital, and in the work of a country practitioner. The operation of excision of the tarsus has probably come into vogue on account of this need; but although this mode of procedure is apparently attended by slight risk and followed by excellent results, if equally good results can be obtained by less severe surgical interference the method is certainly to be discarded. Personal experience [1] in tarsotomy has led me to this conclusion, for although excellent results were obtained it appeared that the resistance to correction was not due so much to the deformity of the tarsal bones as to the tissues (presumably ligamentous) binding the displaced bones together, and that theoretically it was better surgery to attack the latter than the former structures. Simple tenotomy is not sufficient to divide the ligaments which lie close to the tarsal bones. A direct incision, proposed and successfully carried out by Dr. Phelps, of Chateaugay, is objectionable on the ground that correction would leave a gaping wound, and also because on general principles a deep incision is to be avoided if equally good results can be obtained without. Gradual stretching, the method most in vogue, demands in the most obstinate cases a great deal of time and a daily attention not always at command.

The method of forcibly rectifying a club-foot is not a new one, but it has not found favor because of the mechanical difficulties encountered, and also because a practicable means of fixation after such correction had not been in use, consequently not enough has been gained to sanction the procedure. Furthermore, tradition has deterred many surgeons from immediate correction in the fear of subsequent non-union of tendons.

The first mechanical means of value for the purpose of immediately correcting obstinate club-foot was reported by Dr. Morton, of Philadelphia. In two cases in which I had the opportunity of testing this method its efficiency was proved, and fair results obtained; perfect success was not gained from the fact that perfect fixation through lack of experience in the method and in the mode of after-treatment was not effected. The appliance seemed to be defective in that it lacked precision, relying as it did for the correcting force upon straps, which are liable to stretch and slip. The accompanying drawing (Fig. 1) illustrates an appliance which appeared to remedy this difficulty.

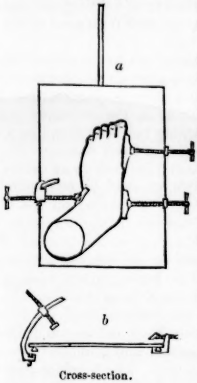
The object of the appliance is to exert pressure under control of the operator in three directions, and also to enable him to twist and raise the front of the foot.

The apparatus consists: —

(1.) Of a plate large enough for any foot.

(2.) Of three steel buffers or padded plates which are attached at the ends to steel screw rods, playing through sockets with a female screw thread at the sides of the large plate. By turning the screws, which is done by the handles, the plates or buffers are pushed forward. They should be placed so as to press (1) upon the side of the first metatarsal; (2) on the side of the os calcis just beneath the inner malleolus; (3) on the outer side of the foot over the projecting head of the astragalus. The female screw through which the male screw plays is adjustable upon an arm curved so that pressure can be applied when it may be found necessary.

Fig. 1.



Cross-section.

The sockets and arms are arranged so that they can be shifted and placed at any point along the side of the large plate, or can be shifted from side to side, so that the appliance can be used for either foot.

(3.) A straight rod, extended in the plane of the plate, gives increased power in raising the front of the foot. This is not always needed, and can be removed.

In operating upon obstinate cases of club-foot (the only cases for which this method is designed) the method of procedure is as follows: Tenotomy is performed in the usual way, the plantar fascia divided first, the tibiales tendons (if contraction is present) and the tendo Achillis last (after the deformity at the arch of the foot has been in a degree corrected); the foot is then forcibly manipulated with the hands, pressure being exercised upon the projecting head of the astragalus by the thumbs, and force applied in a counter direction by the hands grasping the ankle and fore part of the foot. It will be found in certain cases that complete correction of the deformity cannot be accomplished by the hands alone, and the hindrance will be seen to be not a shortened tendon or any tissue accessible to the tenotome.

The instrument just described is then to be applied, and the screws turned and adjusted so that the plates will press upon the os calcis, the head of the astragalus, and the side of the first metatarsal as far as its articulation with the tarsus. The foot will now be firmly held, and by additional turns of the screw force can be applied in the desired directions. Rotation upwards and outwards can be effected by twisting the plate and the equinus deformity of the foot can be corrected by pressing the end of the plate upward. In case it is desired to increase the power in this direction this can be done by increasing the length of the handle. If the screw plates are properly adjusted it will be found that there is no danger of a fracture, as the pressure can be so directed that the ligaments will yield before any of the bones of the tarsus can be broken. An anæsthetic is of course required, and correction will be done gradually rather than by any sudden tear. The extent to which force can with safety be applied is with difficulty defined; it may be said, however, that experience shows that a much greater pressure can be used than would at first be thought feasible, — in a majority of cases enough force can be used to convert the foot from the position of varus to that of valgus, and to correct the

[1] Boston Medical and Surgical Journal, 1881, p. 241.

equinus position. In the simpler cases this is always possible; in the severer cases some minutes should be given to gradually stretch the foot. Sometimes complete correction is not possible at one sitting, and something will have to be left for after treatment or for a second sitting.

After the foot has been brought into a position which is nearly normal, and the contracted tissues so stretched that the foot can be held without a great amount of force, the foot should be fixed in the corrected position. For this purpose nothing has been found so useful or comfortable as a plaster-of-Paris bandage properly applied. The foot should be held in as nearly a normal position as is possible, grasped by one hand at the toes while counter-pressure is exerted on the leg. Roller plaster bandages prepared in the way that is customary for plaster jackets are wound around the foot and leg which are first to be covered with one layer of sheet wadding. The bandages are to be applied without loosening the hold upon the foot, which is to be kept in the corrected position until the bandages have become sufficiently hard, not to yield when the hold on the foot is loosened, and additional turns are then applied around the toes. The bandage should be carried above the knee and half way up the thigh, and the leg should be flexed at the knee thus preventing any subsequent rolling of the limb within the plaster bandage. After the dressing has become stiff, and before it is absolutely hard, it can be cut through by two cuts along the dorsum of the leg and foot and cross cuts over the foot and thigh so that the lid of the plaster box may be lifted and the parts inspected subsequently when necessary without destroying the bandage.

There should be no wrinkles in the bandage, and no pressure should be made upon the dorsum of the foot while the gypsum dressing is hardening. After ten days or three weeks the stiff bandage may be removed, and if the foot is sufficiently corrected a walking shoe applied.[1]

The chief objection which will be urged against this method will be the supposed risk incurred. It would seem, however, that the danger is not so great as would be thought. Experience with osteoclasis has proved conclusively that the temporary pressure upon the skin necessary to break bone does not cause sloughing or even an abrasion; the same is true of the pressure required to rectify a club-foot. Experience has also proved that it is safe to fix a limb immediately after osteoclasis with plaster-of-Paris bandage. The same appears to be the case in club-foot, if ordinary care is used in applying the bandages. Sloughs may occur on the inside of the ball of the toe, on the outer and under side of the sole, and on the dorsum of the foot; but these sloughs are not more troublesome than those sometimes occurring in the use of Scarpa's shoe or appliances, held by straps, and they are not so liable to occur from the fact that in a foot held in a well-applied plaster-of-Paris bandage the pressure is not confined to a few points, but is nearly uniform over the whole foot. In case a slough appears (a fact to be determined by lifting the lid of the plaster-of-Paris box which holds the foot), the following appliance (Fig. 2) can be used



FIG. 2.

until the skin has recovered so that a plaster bandage can again be reapplied if a second one is necessary.

A plaster bandage is applied in the ordinary way from the lower part of the leg above the malleoli to above the knee, which should be bent; a strip of strong iron rod is placed on the first layer of the bandage, bent at the top so as to half encircle the thigh, to pass along the outer side of the leg, and to project slightly above and to the outer side of the outer edge of the foot. At the lower end of this rod a buckle is attached, and the portion lying upon the plaster bandage is thoroughly incorporated by the successive turns of the bandage. A strip of rubber adhesive plaster is wound around the foot (which can be protected in the sole by card-board if necessary), and to the free end of the plaster at the level of the terminal end of the fifth metacarpal a piece of webbing is sewn. This is to be buckled to the buckle attached to the iron rod. Other strips of webbing and other buckles can, if needed be put at any desired point, and by a wrench the iron can be bent in any direction, so that the point from which the pull is to proceed can be placed at any desired direction; additional strips of iron rod can also, when necessary, be applied. It is of course desirable to prevent the whole appliance from slipping down, and this can be done by placing a long strip of adhesive plaster on the skin of the leg before the gypsum bandage is applied, and a buckle on the outside of the bandage; if the free end of the plaster is secured in the buckle, slipping of the appliance down is prevented. A stocking and slipper can be worn on the foot if a hole is cut in the side for the strip of webbing to pass through, and the patient can bear weight upon the foot.

As an objection to the method of applying a fixed dressing, it has been said that the plaster dressing being a fixed one and not allowing motion, gradual gain cannot be made beyond the position in which the foot has been placed. This is of course true, but almost complete correction can be gained in a majority of cases immediately, and the further gradual gain is only such as can be secured by a walking shoe. A fixed dressing secures the indicated rest after the force required to gain the correction, and enables the stretched tissues to adapt themselves to the new position. The foot is forcibly put in a new position, and may be said to have suffered a "sprain," the indications for the treatment of which are fixation, which is most readily secured by a plaster bandage.

The danger of non-union of tendons after correction immediately following tenotomy in resistant cases can practically be disregarded, although it is mentioned by many authorities. In this, as in many other particulars, experience appears to disprove tradition.

After complete correction, — and by that term is meant that the plane of the sole of the foot can be brought to a right angle with the axis of the leg, and that the line of the inner edge of the foot turns to the outside of the plane of the inner edge of the leg, — and after all pain and swelling have subsided, a "walking" shoe is applied. This is to be worn until the muscles have recovered the usual balance of power, the object being to prevent the possibility of incorrect walking.

The requisites of a "walking shoe" are that it should be easily applied, without the supervision of the surgeon or a skilled nurse, that it should allow motion in all directions except those toward the position of former distortion, and that it should not be cumbersome,

[1] Hahn. Berl. klin. Woch., March 19, 1883, describes a new method of holding the foot while a plaster bandage is applied.

heavy, or unsightly, and that it can be readily worn for some time. Various appliances have been in use for this purpose; but the one which has seemed to me the most efficient is the varus shoe, which Dr. C. F. Taylor, of New York, has devised and used, and for an explanation of which I am indebted to him. A published description of this useful appliance had best be left to the originator.

TABLE OF CASES OF CONGENITAL CLUB-FOOT TREATED BY THE USE OF FORCIBLE STRAIGHTENING.

No.	Name.	Address.	Age.	Deformity.	No. of Operations.	Hospital.	Result
1	John Horihan.	3 Fifth Street, East Cambridge.	5 years.	Double.	1	Samaritan Hospital.	Perfect.
2	Stafford Woodworth.	G. W. Woodworth, Kentville, N. S.	5 "	Single.	1	Samaritan Hospital.	Perfect.
3	Jessie Bishop.	J. Edwin Bishop, Highbury, Kings Co., N. S.	4 "	Single.	1	Samaritan Hospital.	Perfect.
4	Sadie McKay.	James McKay, Lanesville, Mass.	3 "	Single.	1	Samaritan Hospital.	Perfect.
5	Albert Burns.	23 Atlantic Corporation, Lawrence, Mass.	4 "	Single.	1	Samaritan Hospital.	Perfect.
6	Edward Sweeny.	97 Conant Street, Boston.	15 "	Single.	1	City Hospital.	Perfect.
7	Morris McDonald.	16 Bolton Street, North Cambridge.	8 "	Single.	1	Children's Hospital.	Nearly perfect
8	Frederic Daniels.	61 Central Avenue, Chelsea.	5 "	Double.	3	Children's Hospital.	Nearly perfect.
9	Mary Feely.	96 Chaffee Street, Providence.	2 "	Double.	1	Children's Hospital.	Perfect.
10	Bessie Kinney.	Sherborn State Prison.	2 "	Single.	1	Children's Hospital.	Perfect.
11	Jessie Kelly.	Merriam Street, Somerville.	18 months.	Double.	1	Samaritan Hospital.	Nearly perfect.
12	Bessie Minard.	Nova Scotia.	4 years.	Double.	1	Samaritan Hospital.	Perfect.
13	Leland Nelson.	S. E. Nelson, Ashburnham, Mass.	6 "	Double.	1	Children's Hospital.	Perfect.
14	Joseph Flynn.	South Boston.	5 "	Single.	1	Children's Hospital.	Imperfect.
16	Joseph Mahoney.	Longwood.	4 "	Double.	2	Children's Hospital.	Imperfect.
15	X Y	Dorchester.	7 "	Double.	3	Children's Hospital.	Imperfect.

All of the foregoing cases were of the congenital deformity of an aggravated type; those of acquired variety were not included in the list.

By a *perfect* result is meant that the patient stands and walks on the whole of the sole of the foot; can when standing on the heel flex the front of the foot above the floor, and that the patient's foot presents no projection of the head of the astragalus or any of the tarsal bones on the outer and upper surface of the foot.

By an imperfect result is meant a condition of the foot falling short of this standard. By nearly perfect, is meant that the heel can be brought to the floor without twisting the foot, but that the front of the foot cannot be raised without lifting the heel. This is true of the left foot in Cases VIII.–XI. The patients are still under treatment.

Nos. 9, 10, 11 were treated by forcible manual straightening without mechanical assistance. Nos. 14, 15, 16 were experimental cases in a measure; they were the first ones treated in this way, and were but partly successful for the reason that the method was not perfected, and chiefly because the feet were not fixed after operation from fear of injury following the use of plaster-of-Paris bandages, and because the bandages were not applied above the knee with the limb bent, and twisting in of the foot inside of the bandages occurred. The deformities were not more resistant and were less severe than in the other children who were successfully treated. They were all benefited, and walk with slight noticeable deformity except when the feet are bared. Case XVI. is instructive from the fact that an aneurism of the posterior tibial followed a month after tenotomy. The tenotomy was freer than was needed, but at the time it was thought advisable to cut very freely as the appliance for stretching was not perfected. The aneurism was, a month later, cut down on, and found to proceed from a pin-hole opening in the artery. This was tied as any bleeding point would be, and the patient recovered promptly, and at present, three years later, walks without appliances. An equinus deformity remains, the patient being unable to bring the heel to within one inch of the ground with twisting the front of the foot, and walks on three fourths of the sole.

Case I. has been the longest under observation, and would indicate that there is little danger of recurrence of the deformity. At the present time he walks perfectly well, without appliance, and with perfect feet. For a year and a half after his discharge from the hospital he has been seen professionally but five times. He wore for a year light walking supports, which his mother has been able to adjust herself without medical supervision.

Case II. has not been seen since his discharge from the hospital. Letters from the parents report that at

August 10, 1882. October 4, 1882.

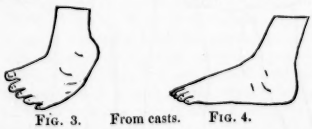


FIG. 3. From casts. FIG. 4.

the present time, eighteen months after discharge, the child is walking perfectly.

The same is true of Case III.

Case IV. was one of equally severe deformity. The patient is now, eight months after discharge, able to walk perfectly. The amount of flexibility at the ankle-joint is indicated by the accompanying tracing (Fig. 5),

taken by placing a piece of paper at the side of the leg, the sole of the foot being flat on the floor.

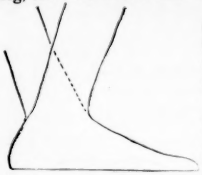


FIG. 5.

In Case VI. the patient suffered a good deal of pain for a week, and on the removal of the plaster a slough was found on the side of the ball of the toe and also on the dorsum of the foot. The appliance as indicated in Figure 2 was used, and the patient went about with crutches. He began to use a walking shoe in six weeks, and was discharged from the hospital, and three months later was in the position indicated in the photograph, and able to walk about

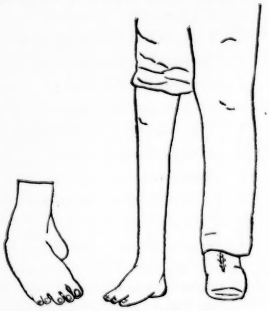


FIG. 6. Drawn from cast. August, 1883.

FIG. 7. From photograph. January 1, 1884.

FIG 8. From imprint of sole of foot. — January 1, 1884.

freely without appliance, crutch, or cane, having taken care of his foot himself during that time, he being seen medically but six times, chiefly for observation. The treatment was perhaps hurried unnecessarily, and an earlier removal of the plaster would have prevented the sloughs appearing. These, however, did not in any way prevent the continuance of treatment.

The patient's foot was very resistant, and at the time of operation all possible force was required after tenotomy to press it into a normal position. The patient was fifteen years old, and had been walking on a deformed foot all his life.

Case VIII. was the most resistant of the series, partly because the foot was small and force was therefore with difficulty applied. Three sittings were necessary to straighten the left foot; a small slough appeared, and the spur appliance was used. The right foot was straightened in one sitting.

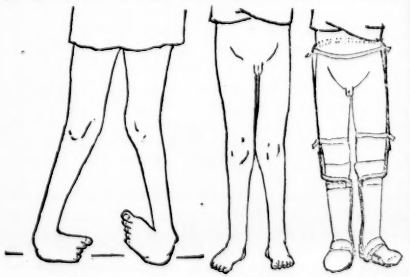


FIG. 9. From photograph. September, 1883.

FIG. 10. From photograph. January 1, 1884.

FIG. 11. From photograph. January 1, 1884. Wearing appliance.

The length of time required in the treatment of the above cases varied. In the cases where the feet were the least resistant the plaster bandage was removed in from three to four weeks, and walking shoes applied immediately. In Cases II., V., and XIII., the whole active treatment occupied but a month, after which time the patients were left to the parents' care and not seen by the physician, although directed to wear the walking shoes for a year. Case XIII. was seen a year afterwards, and the feet found to be in a perfectly satisfactory condition. The same may be said of Case V., seen three months after discharge from the hospital. Where greater resistance was encountered, longer time was needed; Case VI. was seven weeks under active treatment. Case VIII., the most resistant of the cases collected, was four months under constant observation. In both the plaster bandages were removed on account of sloughs, and the spur appliance used until the feet were in a condition for a walking shoe.

It should be born in mind that the method of treatment by extreme mechanical force is not to be used except in extreme cases, and in cases where a speedy result is desirable. It is not claimed that equally good results cannot be obtained by other more gradual methods. The writer, however, believes the method to be safe, to save time and trouble, to give perfect results.

A CASE OF "WASTING PALSY" (PARTIAL).[1]

BY GEORGE M. READ, M. D., DORCHESTER.

MR. A., American, married, merchant, aged fifty-two years, five feet ten inches high, ordinary weight 160 pounds, gave a good family history, and said of himself that, aside from occasional slight attacks of "indigestion," he had always been well till within a year. For thirty years business had confined him closely, and he had been on his feet almost constantly during the day, standing much of the time at his desk. Less than a year previous to first consulting me (February 5, 1883) Mr. A. thought his left lower limb showed fatigue more readily than usual, and found it necessary to *sit* at his desk. Later an ordinary walk became fatiguing, and he was aware of sensations of "coolness," and "prickling" in the weak member, with occasional muscular "twitchings" as the limb became tired. Within a month the patient had thought the left extremity smaller than its fellow, and in consequence sought medical advice. There has been slight œdema of left foot. Mr. A. has never had a chancre nor suffered a blow or fall at any time. Special senses and sexual function unimpaired; appetite poor; bowels constipated; micturition natural.

Weight at time of first interview 145 pounds. Inspection showed a man of tolerable muscular development, but with a small amount of subcutaneous fat. The left lower extremity was noticeably smaller than the right. No external signs of syphilis. Physical examination revealed nothing abnormal about heart or lungs. Pulse 76; temperature normal; tongue furred; breath offensive; stomach and intestines slightly distended by gas. No tenderness on pressure over any portion of the

[1] Essay by William Roberts, M. D., London, 1858.

spinal tract. Left upper extremity somewhat better developed than right, but patient is left handed. By measurement the left lower extremity was found smaller in circumference by five centimetres than the right, the comparison being between several points both above and below the knee. Muscles of nates apparently unaffected. Left foot slightly œdematous. Patient stepped from chair, stood, and walked well with his eyes shut. The cutaneous sensibility on the affected side seemed a bit increased. Use of the induced current proved the muscular contractility unimpaired.

Urine normal in amount for twenty-four hours; light colored; specific gravity 1025; neither sugar, albumen, nor casts.

Here is a case in which the only prominent symptoms are diminution in size and loss of power in one lower extremity, the functions of which, aside from this loss of power, are unaffected. In forming a diagnosis the history allows one to eliminate palsy from lead and atrophy resulting from continued rest or following injury to a nerve. One at first thought might confound this with a case of tabes dorsalis, but here the power of muscular coördination is unimpaired; the trouble is confined to *one* lower extremity, the cutaneous and muscular sensibility is undiminished, no history of pain or bladder affection, and the diminution in size of limb has followed closely the loss of power, the only other prominent symptom in this case.

It is seldom that "wasting palsy" attacks primarily and exclusively the muscles of the lower extremities. In a tabulated report of fifty cases of (partial) progressive muscular atrophy in but six did the disease make its appearance in the muscles of the lower extremities. Granting the diagnosis correct, we have here an unusual form of a comparatively rare disease.

The subsequent history of this case, covering eight months of treatment, is as follows:—

Mr. A. underwent, at the hands of a competent attendant, a thorough course of massage and galvanism, enjoyed daily surf bathing during the three summer months, lived as entirely in the open air as weather permitted, and confined his exercise within the point of fatigue. His diet consisted of easily-digested meat, strong beef soups, fruit, and plenty of milk and cream, a glass of sherry daily. Internal medication, small and increasing doses of sol. potass. arsenitis.

At our last interview (September 20th) Mr. A. showed a marked improvement in his general condition; tongue clean, appetite good with fair power of digestion. Has gained seven pounds in weight. Uses cane less, and is able to walk one or two miles without fatigue. The sensations of coolness and twitching of muscles is less. The puffiness of left foot is gone, and actual measurement shows a present difference in the circumference of the two limbs of but three centimetres +.

After eight months' observation, with the assurance that the disease has not progressed, but, on the other hand, shows a tendency toward amendment, a prognosis of permanent arrest with possible recovery seems not out of place.

The patient is advised to continue the treatment by massage and galvanism, live in the open air, and exercise with discretion.

Of eighty reported cases where the result is mentioned fifty per cent. have terminated in arrest, amendment, or recovery. Other general conclusions drawn from these cases are that the disease has its primary seat in the muscles, nerve changes following later when the muscular fibres have to a large extent disappeared.

Under the microscope "the striped elementary primitive fibres were found to be completely destroyed, the sarcous element being diffused and, in many places, converted into oil globules and granular matter, whilst the sarcolemma or tissue of the elementary fibre was broken down and destroyed."[1]

"Inherited proclivity," syphilis, exposure to cold, and muscular exertion are supposed to play a part in the ætiology of wasting palsy, though many cases occur in which none of these conditions have been present. A disease of adult life, more prone to attack males than females, showing a marked preference for the muscles of the upper extremities. The never-absent phenomena are "destruction of the muscular substance with consequent loss of power."

The treatment giving the best results is that generally recommended in the case reported.

PLASTER SUPPORTS.

BY W. T. BROWNE, M. D. (HARV.), JEWETT CITY, CONN.

THE object is to produce fixation with a material which shall be easy of application and easy of removal, being cleanly, light, durable, cheap, and ready for use as soon as one is done applying it. This may be attained by the use of plaster of Paris in the following way, for a support of the spine for instance: —

Take three, four, or five pieces of plaster gauze as wide as the support is to be, and long enough to go around the body and lap ten or fifteen centimetres each way. Lay these on another piece of the same length and eight or ten centimetres wider, and stitch them all together in the middle of their length, so that the seam shall extend up and down the front of the completed support; rub cosmoline into this seam in as narrow a line as possible. Hold the layers of gauze up to the body, so that the seam shall come over the sternum and the widest layer next the body, and cut out where they come under the arms and in the groins. It is not necessary to be very particular about the cutting, as the edge can be easily turned over the required amount after the plaster has been applied and before it has set.

The patient, having on the usual thin undershirt that fits well, and without any pads, is suspended in the usual way.

Eight hundred or one thousand grammes of plaster are now mixed with water to the consistency of cream, and while an assistant holds the gauze up to the body, the first layer is brought down smoothly and rubbed with plaster, then the next, and so on till all have been laid and filled with plaster; then turn the edges of the widest layer over the others, thus forming a binding and a smooth edge.

The plaster may be put on with a brush or with the hand; I prefer the hand. It requires about fifteen minutes to apply the plaster, so it should not set quicker than that.

Such a support is cleanly, for the edges being bound are not liable to crumble.

It is much lighter than when put on with rollers, as

[1] Meryon, Med.-Chir. Trans., vol. xxxv., p. 76.

it does not need to be as thick owing to plaster all being mixed at once and setting in a uniform mass.

A bandage made in this way is two or three millimetres thick in front, and four or five behind, and will last three or four weeks. If it is wanted to last longer, it may have more gauze and more plaster.

The cost of material is only a few cents, and the plaster will be found to be very thoroughly set by the time the binding has been turned and the surface rubbed smooth.

The plaster should be tested before using to ascertain how long it requires to set, and if it requires a few minutes more than by experience it is found to take to apply, it may be mixed a few minutes before required for use.

When it is necessary to remove the support it may be ripped open along the seam as readily as any seam in cloth.

It requires less experience to apply a bandage in this way, as it is impossible to draw it tighter in one place than another and produce ridges on the inside.

REPORT ON THEORY AND PRACTICE OF MEDICINE.[1]

BY GEORGE B. SHATTUCK, M. D.,
Visiting Physician Boston City Hospital.

I. ARTIFICIAL INFLATION OF THE COLON WITH GAS FOR DIAGNOSTIC AND THERAPEUTIC PURPOSES.

PROFESSOR V. ZIEMSSEN [2] has extended to the large intestine a procedure which he, and others, had previously advocated and practiced upon the stomach, namely, its artificial inflation with gas. Others, as well as himself, have undoubtedly advanced the suggestion of this wider application, but he seems to be the first to publish the results of its practical use.

The procedure is simple. A rectal tube six inches long is inserted and attached to rubber tubing terminating in a funnel, by which solutions of bicarbonate of soda and tartaric acid are successively introduced into the colon, for the extreme expansion of which about five drachms of bicarbonate of soda and four and a half drachms of the acid, giving off about five quarts in volume of gas, are required. To avoid the pain attendant upon a too sudden expansion of the wall of the intestine a divided introduction, with a few minutes' pause between each portion, of such an amount of alkali and acid is advised, each divided portion of solution being followed by a small quantity of water to prevent the evolution of gas in the tube. The escape of gas by the rectum is easily prevented by pressing the buttocks together. A lesser volume of gas is required when the object is merely to excite peristaltic action than for diagnostic purposes. In determining the diagnosis of transposed viscera, however, a smaller volume of gas is exceptionally recommended.

As an aid to diagnosis the procedure may be expected to throw light upon the position, the form, and elasticity of the colon; upon the resistance of the cæcal valves to the passage of gas; upon the communication of the colon or rectum with neighboring organs (the stomach, the small intestine, or the bladder); upon the position of contractions or closure of the intestinal calibre; and, under some circumstances, upon the nature of an impediment to the movement of fæces. From the therapeutic stand-point this method of gas-inflation is of value, and much superior to inflation by water, when one desires to excite strong peristaltic action; to tear through or dilate strictures; to reduce dislocations or intussusceptions; to separate adhesions.

Among other displacements of the colon V. Ziemssen has found the method useful in determining downward displacements, the relation of the intestine to ovarian and other abdominal tumors, and its interposition between the upper surface of the liver and the abdominal wall.

Typhoid fever and tuberculosis of the intestine are the only conditions mentioned as contra-indicating the use of the method. Neither in the presence of cancerous growths or fæcal accumulations, or of peritonitis with or without adhesions, have any untoward results occurred. The normal intestine will resist an enormous degree of inflation, as was proved by experiments upon bodies immediately after death, it having been found impossible to rupture the colon by such experiments.

II. THE RENAL CIRCULATION DURING FEVER.

A series of experiments upon dogs, in whom fever had been artificially induced, was undertaken by Dr. Walter Mendelson at the Pathological Institute of the Leipzig University, to ascertain the actual condition of the circulation in the kidney during fever. To his report [3] of this research the Cartwright Prize Essay for 1883 was awarded.

An instrument invented by Ray and named the oncometer, or bulk-measurer, was used to determine the condition of the circulation in the kidney, to which it can be readily applied without interfering with the functions of the organ. The dogs used were previously rendered immobile and insensitive for the application of the oncometer by brain puncture, and the pyrexia was produced by subcutaneous injections of pepsin, which was found to be the most satisfactory pyrogenous agent.

By these experiments it was determined that attendant upon the febrile process there is a diminution in the volume of the kidney; it was further ascertained by other experiments that this diminution, as was to be anticipated, was dependent upon contraction of the blood-vessels of the kidney; and again, by causing a local fever in the brain, whilst the kidney and the rest of the body remained of normal temperature, the conclusion was drawn that this contraction of the vessels was in all probability the result of a stimulus conveyed to them from the central nervous system, the stimulus being the consequence of irritation of the central vasomotor centres by the abnormally hot blood circulating through them during fever.

It is suggested that these conclusions, if correct, — and the experiments and their interpretation seem to have been quite carefully guarded — offer, in addition to the increased loss of water by the lungs and skin, another available explanation for the decrease in the amount of urine secreted by fever patients; and that the occurrence of albuminuria, a very constant symptom in nearly all high fevers, becomes readily understood in view of the extreme anæmia thus shown to affect the kidney during a hyperpyrexia, the glomerulal epithelium being insufficiently nourished with arterial blood and thus losing its function of retaining within

[1] Concluded from page 253.
[2] Deutsches Archiv f. klin. Medicin., vol. xxxiii., p. 235, 1883.
[3] Am. Journ. Med. Sci., October, 1883, page 380.

the vessels the albuminous portion of the blood plasma.

III. ABSCESSES OF THE LIVER.

The largest field for experience in the diagnosis and treatment of hepatic abscesses is found in tropical or subtropical countries, and we are glad to record the observations and conclusions of observers in such climates.

Quejia [1] confirms the common experience that abscesses of the liver are situated most often in the right lobe, and in the posterior border of this lobe especially. Abscesses of the superior surfaces of the liver are marked by severe pain of the right shoulder, while those on the concave or inferior surface give rise to disturbances of the digestive functions. Those large abscesses which occupy a considerable part of the thickness of the organ are accompanied by both symptoms, pain in the shoulder and digestive disturbances. Bearing in mind the frequency of abscess on the posterior border, and the tendency to open spontaneously into the bronchi, careful percussion, marking the limit of dullness, may afford a guide as to where incision should be made. The coexistence of pain in the shoulder and digestive perturbation, without dullness of astained form, but with the presence of the well-known symptoms of abscess, authorizes us in making an incision, directing it towards the centre of the organ. As to whether hepatic abscess is susceptible of spontaneous cure he quotes a case in which he found on post mortem an osteo-calcareous mass, due apparently to a hepatic abscess cured by cretification of its walls. In true hepatic abscess jaundice is always wanting. Incision should be practiced when the line of dullness reaches or passes the nipple, and in many cases is best made behind the nipple line.

IV. CAPILLARY PULSE.

As is well known, under normal conditions the flow of blood, which is intermittent in the arteries, becomes apparently continuous in the capillaries, but a physiological capillary pulse can be felt and seen under favorable circumstances in certain positions, as the end of the fingers when pressure is applied, the skin of the forehead, the inside of the lip, the fundus of the eye. Under some abnormal circumstances the capillary pulse becomes very apparent and nearly constant, especially in compensated aortic regurgitation attended by hypertrophy and dilatation of the heart, and diminution of elasticity of the arteries. Under such circumstances the aortic lesion is said to have been diagnosticated from observation merely of the capillary pulsations in the red mark on the forehead after removal of the hat.

Such a diagnosis should rather be designated a clever guess, for the capillary pulse is not confined to aortic regurgitation, but has been observed in cases of interstitial nephritis with arterio-sclerosis, of arterial atheroma, of chlorosis, of extreme anæmia, typhoid fever with hyperpyrexia, general paralysis, etc., etc.; many cases of aortic regurgitation, moreover, do not exhibit the phenomenon at all.

Ruault [2] advances the opinion that the capillary pulse can only occur when the elasticity of the capillaries is diminished, which is probably a sufficiently good explanation for its presence in aortic regurgitation, but not in typhoid fever and anæmias.

[1] Revista Medico-Chirurgica de Mejico, October 10, 1883. London Medical Record, February 15, 1884.

[2] Gaz. Hebdomadaire, December 14, 1883. British Medical Journal, February 9, 1884, page 277.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

March 10, 1884. The President, Dr. Charles D. Homans, in the chair.

SUPPRESSION OF URINE TREATED WITH CANTHARIDES.

Dr. W. C. B. Fifield reported the case, which he had seen in consultation with Dr. Rogers, of Dorchester. The patient was a hard drinker, whose symptoms were at first obscure, but who had later had albuminuria with casts. Complete suppression had lasted some days. Active treatment had been of no avail, and the patient was comatose and failing. Tincture of cantharides was then given hourly in drop doses, and after some hours the secretion was reëstablished, and the patient recovered so far as to be out.

TREATMENT OF BLOOD-POISONING FOLLOWING SURGICAL OPERATIONS.

Dr. W. G. Wheeler reported three cases, the publication of which is reserved. He asked the opinion of the Society as to the effect of large doses of quinine. It appeared to him that an irritable stomach is one of the early symptoms of septicæmia. He had not obtained the benefit from fifteen-grain doses that we read of, and it disagrees with the patient.

Dr. C. B. Porter agreed cordially with the writer in the importance which he placed upon drainage. He thought that the first cardinal principle in the treatment of wounds was that they should be properly drained, and second to that that they should be antiseptic. He had never seen any benefit from quinine given to reduce temperature in septicæmia, but relied entirely upon alcohol. So long as the patient is not intoxicated he is not getting too much. A rapid pulse is only an indication for more alcohol, and it is his rule to give it as soon as the temperature goes up. He has given as much as forty-eight ounces of brandy in twenty-four hours, with the results of lessening the fever. If it cannot be retained by the mouth it may be by the rectum, and if it cannot be held there alone it may be by the addition of morphia or chloral, which are in these cases of comfort to the patient. The essentials of treatment were drainage, disinfectants, and alcohol. He did not apply his remarks on quinine to the high temperature of typhoid. With reference to one of Dr. Wheeler's cases of slight abrasion, he said that he had seen blood-poisoning which had its point of departure in the granulations about a urethral calculus, which was got away at the second attempt to grasp it with the forceps, they being introduced into the urethra but once.

Dr. Wheeler spoke of the value of giving stimulant subcutaneously when it can be retained in no other way.

Dr. George W. Gay said that it would be an interesting point to determine the relative frequency of

traumatic fever, septicæmia, and erysipelas in cases of wounds both in hospital and in private practice. He thought a much larger proportion of patients having open wounds were thus affected than was commonly supposed. He had seen as much erysipelas outside the hospital as in it in proportion to the number of his cases. When it is prevalent in the hospitals it also prevails outside, and in the practice of men who have no hospital appointment. He is inclined to refer it oftentimes to some influence in the air rather than to any local cause. The speaker called attention to the fact that with patients who, after an operation or an injury, have a sharp attack of traumatic fever, and after seven to ten days recover from it, then for a certain time one may do almost any operation without much danger from septicæmia or traumatic fever. He was not prepared to say that a tentative operation was almost justifiable, but it does protect for a time. If, when the temperature begins to go up after operation, the surgeon looks for a blush and for pent-up pus he will find one or the other in a majority of cases. He had seen little or no good result from the use of quinine in cases of blood-poisoning. He also thought that another once much-praised drug, tincture of chloride of iron, is of no value in septic inflammation. He relied on drainage and antiseptics externally, and on opium, food, and stimulants internally.

DR. FIFIELD said that when the first report of the Boston City Hospital was issued it caused much comment on the mischief rising from placing a hospital on made land, but with every improvement in drainage and in cleanliness, as well as with Listerism, results have improved till they are now something to be proud of. Messrs. Callender, Keith, and Tate have shown conclusively that cleanliness is necessary to their success. The speaker could not reconcile these facts with a belief in atmospheric influences as a cause of the disease. Dr. Fifield could not too strongly express his belief in the value of stimulants in septic fever, or in any other, if the temperature became high. He had not seen any good produced by large doses of quinine, and he had a poor opinion of morphia, which he thought depressed patients who might bear the tincture of opium well. He thought that calomel was not sufficiently appreciated. With rising pulse and temperature, which are not controlled by opium, stimulants, and quinine, the use of ten to fifteen grains of calomel may empty the bowel, and relieve the fever. In proof of this he related two obstetric cases.

DR. PORTER said that it was particularly pleasing to find such unanimity of opinion as to the value of alcohol.

In surgical cases constipation sends up the temperature, and a purge brings it down. Menstruation also sends it up, so that he has the presence of the catamenia expressed on his hospital temperature charts. During its presence a rise of two or three degrees does not disturb him. We know very little as yet of the normal changes of temperature in health.

DR. FIFIELD had observed the same thing. He also referred to a recent article on the possibility of cutting short typhoid with calomel, and to the former belief that it could be cured with large doses of calomel and ipecac.

DR. GAY also agreed with Dr. Porter on the effect of the catamenia on temperature. He remarked that he had seen perhaps a half dozen cases of operations, involving large blood-vessels, which have done badly for ten or twelve days, when there has been a large secondary hæmorrhage, after which they have begun to recover. If this meant anything it meant that the old plan of bleeding was sometimes a good one. Our ancestors, with their emetics, cathartics, and bleedings, may not have been so far wrong as has since been supposed.

DR. FIFIELD reported a case of purpura in which there were unsuccessful attempts to check hæmorrhage. Contrary to expectation the bleeding seemed to benefit the patient. Bleeding was the treatment of the ancients.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.[1]

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

MR. S. M. COLCORD, a former president of the American Pharmaceutical Association, was called upon by the chairman, and responded as follows:—

I was not expecting to be called upon to speak. I am not now in the drug business, consequently not an adulterator, not personally interested in the law, but am in the milk business, supplying pure milk. I am interested in this question as a matter of public welfare and consider it a question of vital importance. More than thirty years ago I served on committees to detect, expose, and prevent adulteration. The American Pharmaceutical Association had its birth in a convention of the best apothecaries in the United States, called for the purpose of exposing and preventing the importation of inferior, adulterated, or spurious drugs. A law was already upon the Statute Book, and this convention was called to state the facts to the government, and pray for the enforcement of the act for the public welfare. The convention found it to be a work of time, and that home adulterations were equally important, and that patent medicines seemed to be exerting a controlling influence. After two annual conventions a constitution and code of ethics were formed, and the convention adjourned to meet in the city of Boston as the American Pharmaceutical Association, with a Boston man for president, and here in this city of Boston was fought the great battle of adulteration. On the question of "admitting all drugs good of their kind" it was decided, mainly by Boston votes, that the large class of spurious, adulterated, and sophisticated goods was to be admitted no longer through our custom houses. The consequence was that all the distributing ports of the world soon found out that the United States was no longer to be the market for their worthless trash. Orders went out for goods of such a quality as would pass the custom houses, and it soon came about that foreign consignors sent no more poor goods to this country, and our dispensers became acquainted with a class of drugs heretofore unknown in our country, and now every one is satisfied with the law; no one is oppressed; dispensers, *well informed*, have no trouble in finding pure articles of fine quality, and everything is lovely in that direction. But how about patent medicines and home adulterations? Well, the new Association found itself born of "poor but honest parents," and not having arrived at a fighting age, voted that patent medicines or secret

[1] Concluded from page 256.

remedies were not a legitimate part of the dispenser's business, and as this was too big for them to handle, and as they had so much other useful work to perform, that they would have nothing to do with this question. Home adulterations continued to be reported upon year after year, the Association growing more critical and severe (without accomplishing anything) until the committees making the reports were threatened with private prosecution. It was then voted to change the committee so as to serve the drug market, and the Association has since done what it could by fostering investigation, science, and education as a preventive and controlling influence upon home adulteration.

As I am now out of the business I do not feel like talking upon this subject. The fact is, these people are all my friends, — the wholesale druggists, the retailers and dispensers, the prescribers, and the patients who have patience to take these adulterations, and my experience has been that I cannot shoot an unknown enemy at long range, without finding it a fratricidal onslaught with poniard and pop-gun.

This matter of home adulteration is not a thing that has grown up in the drug business. You might as well say the drug business grew out of adulteration. I presume in the beginning they started in the race together, but I think now that adulteration may be a little ahead. It has always seemed to me that many honest and honorable men in the drug business have come to think that what many people call adulteration, sophistication, and substitution, is an unavoidable and legitimate part of the business, and that having adopted the business they adopt these side issues as annexes to the law and the *profits*.

Now this law was not put upon the Statute Book by any action of the drug trade, neither was any remonstrance made to it that I am aware of, and the drug trade has had very little interference from the law, and it only desires to be let alone, and to do as it pleases, and feels abundantly able to settle points of quality with its customers without the interference of law. But still the fact remains that the United States Pharmacopœia is nearly a perfect standard of quality, fully recognized as a legal standard, with nothing ambiguous or undefined, and very easily conformed to by all persons qualified (even very poorly) to do an ordinary drug business; that by enforcing this law all are freed from disloyal and dishonorable competition in quality, and can have no reasonable objections to the law.

If we try this law fully enforced for awhile we shall find relief from all conflictions between honesty, conscience, and profit; we should have the confidence of our customers, and all parties would be benefited commercially, and the mercenary taint that clings so tenaciously to the drug business will be so far removed that few, if any, would be willing to have the law repealed or become a dead letter.

MR. HENRY CANNING, President of the Massachusetts College of Pharmacy, spoke as follows: —

Experience has shown that the President of the College of Pharmacy cannot be too careful in acting as its mouth-piece, for the reason that the institution is apt to be held responsible for all sorts of legislation touching the pharmacist.

As an individual, however, I trust that if any modification of this law must be made it may be only in the direction of making it stronger. It is eminently a law for the better protection of suffering humanity.

I was somewhat chagrined on hearing the report of the various adulterations in the line of food and drugs to find that so large a percentage of the pharmaceutical products examined had been found wanting, but the feeling was a little softened when I learned that the same report showed a much larger percentage of adulteration in important articles of food.

Again, I trust that if any change in this law be made it be only in the upward scale.

PROF. G. F. H. MARKOE spoke in favor of the present law as follows: —

MR. PRESIDENT, — I am heartily in favor of the law for the prevention of adulteration of food and drugs, and would be sorry to see it changed except in the direction of greater efficiency.

The remarks by the gentlemen who have spoken before me place the subject of the adulteration of drugs in its worst aspect. More than twenty years of practical familiarity with the drug market enables me to affirm that during all that time there never has been, and there is not now, any serious difficulty in getting good drugs, pure chemicals, and well-made, full strength pharmaceutical preparations from all reputable wholesale druggists or manufacturing chemists, provided the pharmacist or the physician is willing to pay a fair price for choice drugs and standard preparations. The sharp competition in the prices of goods, mainly introduced by unscrupulous dealers, who care nothing for quality, has a great deal to do with the adulterations and substitutions that are found in the drug trade, especially in the line of powdered drugs, which may be quite worthless, and yet appear equally as good as the powder made from a pure drug. A skillful drug miller can transform worm-eaten or rotten rhubarb into a nice-looking powder quite as handsome as that furnished by a prime article of Chinese rhubarb. Citrate of iron and quinine may contain two per cent. or twelve per cent. of quinine, and yet the two samples may appear to be alike; a careful assay alone will show the true character of the article. But although citrate of iron and quinine with less than the standard quantity of quinine is quite common in the market, and is bought by those who will not pay the price for the officinal article, yet I feel sure that a very large portion of all that is sold is of good quality, because the chemists who produce the largest part of all that is used in the country make an honest preparation, and also because the great bulk of all the dispensing business is in the hands of honest and capable pharmacists, who demand a guarantee of quality from those of whom they buy, and who know enough to reject that which is not fit for use.

The wholesale drug trade of the country, with but few exceptions, is in the hands of honest and honorable men, who would much rather deal only in the best grades of drugs and only in the products of the most reputable and skillful manufacturing pharmacists and chemists. The efficient enforcement of the drug law will compel the few firms who willfully force poor goods upon the market to mend their ways; and since there is little chance for underselling on goods of equal quality the ruinous competition which compels an honest man dealing only in honest merchandise to meet the prices quoted by dishonest dealers for articles bearing the same name and label, but far below the standard of purity and quality, this sort of unfair and unjust competition will be kept well in check by the law in question, and I feel sure it will

receive the hearty support of all well-meaning dealers.

A few words with regard to the pharmacist as distinguished from the druggist or wholesale dealer in drugs. I hold it to be his duty to closely watch all his supplies and to assure himself of their proper quality. The United States Pharmacopœia of 1880 contains concise and accurate descriptions of all officinal drugs and chemicals, together with statements of the adulterations and impurities to which they are liable, also giving good tests for purity and practical methods for the recognition of sophistications. This part of the work is so well done that no intelligent pharmacist has any excuse on the score of the lack of a sufficient guide and standard. Those who do not know enough to use this excellent standard must either employ some one competent to interpret and apply it for them or run the risk, under the law, of being ranked with those men who willfully transgress for the hope of greater gain.

W. W. BARTLETT, Ph. G., Vice-President of the College of Pharmacy, spoke as follows: —

MR. CHAIRMAN, — I am very much interested in this adulteration law, and have attended many of the trials and hearings that have grown out of it.

I am first vice-president of the Massachusetts College of Pharmacy, but come here in my individual capacity only. It is contrary to the policy of the college to take part in anything of a political nature, it being strictly an educational institution. I believe that the law should remain on the statute books just as it is. The changes now sought to be made in it are in the interests of those who have been detected in adulterating their goods and aim to make the law totally inactive. The best druggists in Boston favor the law as it is, and many have been present at the public hearings and have so expressed themselves openly.

The action of the Boston Druggists' Association in the matter of adulterations has not been clearly understood by all. By your leave I will read the following resolution, offered by myself, and unanimously adopted by that body, November 27, 1883: "Resolved, That the Boston Druggists' Association heartily condemns the practice of adulterating drugs and medicines, and will give its earnest support to any fair and legitimate means for suppressing the obnoxious business."

Physicians will have no difficulty in obtaining drugs and pharmaceutical preparations that are fully up to the standard of the United States Pharmacopœia of 1880 if they demand them. I make a practice of assaying my opium before making tincture of opium, and have found in every case the opium fully up to the requirements of the United States Pharmacopœia, 1880, when procured from a reliable source. I have also examined a sample of citrate of iron and quinine for a wholesale druggist in this city, which was the product of the laboratory of a reliable manufacturing chemist, and found it fully up to the standard of the United States Pharmacopœia, 1880.

These facts show that it is quite an easy matter to get reliable drugs and pharmaceutical preparations. The greatest difficulty that the retail druggist has to contend with is unfair and dishonest competition. The dealers in fancy goods having taken from us a part of our business, and established ruinous prices for the articles so taken the public immediately based the prices of prescriptions and drugs on these prices regardless of purity and quality, and many unscrupulous druggists have met these prices and furnished correspondingly bad goods.

I think that physicians should discriminate in favor of those stores where only strictly pure and standard goods are dispensed.

I believe that much trouble comes from the millers. I had occasion not long since to have a white preparation ground and I found a cubeb and some gum arabic in the tailings. On requesting the miller to allow me to visit his mill he objected, and I found that he did his grinding under lock and key.

In conclusion I would state that I think that the law as it is can be safely left in the hands of the Board of Health without working hardship or oppression to the honest pharmacist or wholesale druggist.

DR. DAVENPORT, in reply to a suggestion that drugs from some reputable manufacturer should be specified by the physician in prescribing medicines, stated that he considered it better to demand a good article and leave it to the discretion of the pharmacist to supply the drug from any manufacturer he might think proper, or from medicines manufactured by himself if he should choose to do so. In this way the responsibility for the quality of the goods is taken from the prescriber and is placed upon the dispenser, who is also stimulated to the selection or preparation of articles of standard quality and reliability.

WM. C. DURKEE, Ph. G., spoke as follows: —

I am especially glad to hear the last remarks of Dr. Davenport. The practice of specifying a particular manufacture of pharmacopœial preparations does not seem to me a good one, but one, should the custom largely increase, which will produce injury to both apothecary and doctor.

The apothecary having little occasion to practice by manufacturing, the knowledge which he may once have acquired, will become less inclined or able to apply the pharmacopœial tests for purity and quality to those few drugs or preparations which are not ordered by the name of some manufacturer or dealer. The responsibility of the apothecary ceases when he complies with the order of a physician who indicates the maker of the preparation he wishes dispensed, and the physician assumes all the responsibility for quality, as the manufacturer may reside in another State or country and not be amenable to Massachusetts law. Whereas if medicines are ordered by the officinal name only, the pharmacist is wholly responsible for quality, and if able to properly assay the officinal preparations, he is competent to manufacture them, and is entitled to a portion of the profit which would otherwise often go to any irresponsible foreign manufacturer who creates a demand for his preparations by advertising or otherwise.

I am heartily in favor of the law as it now stands, and believe it will do much to elevate the practice of pharmacy. It will help to do away with the competition of those who buy poor drugs and sell preparations from them cheaper than good preparations cost to manufacture. It will help us to furnish physicians with reliable remedies, thereby adding to the faith in and knowledge of medicine and increasing its usefulness.

The pharmacist should be held responsible for quality, but should be allowed to make, or choose the maker of the medicines he dispenses.

DR. GEORGE B. SHATTUCK called the attention of the Society to the bill lately introduced in Congress by a Pennsylvania representative to provide for the preparation and publication of a new pharmacopœia. The subject was an important one and had a direct bearing

upon the question then under discussion. The present Pharmacopœia had been prepared by the best experts in the country after careful consideration and consultation. As was shown by preceding remarks of some of the well-known pharmacists, who had added the weight of their presence to the meeting, the better the changes made in the work were understood the more they were approved of. The book had already been adopted as a legal standard in four large States, and was also the standard adopted by the United States Treasury Department. As many other excellent reasons readily suggested themselves why a new pharmacopœia was unnecessary and objectionable, and not one that he could think of in its favor, the speaker begged to be allowed to offer and move the adoption of the following resolutions: —

Resolved, That this Society is strongly opposed to a bill introduced into the National House of Representatives January 8th last, by Mr. Randall, entitled A Bill to Prepare and Publish a National Pharmacopœia for the United States. The Society believes that the present Revised Pharmacopœia is at the very least as good a work as is likely to be secured by the passage of this bill.

That all necessary legal authority which the present Pharmacopœia does not now possess can be easily given it.

That the complication which would necessarily arise from two pharmacopœias is undesirable.

Dr. F. H. Williams seconding the motion, the resolutions were unanimously adopted.

Mr. G. F. H. Markoe, of the Massachusetts College of Pharmacy, spoke against the bill and in favor of the present Pharmacopœia upon much the same grounds as those already given.

Adjourned at 10.30 o'clock.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

May 12, 1883. A Clinical Chart was exhibited by Dr. Green.

CASE RESEMBLING INFANTILE PARALYSIS, CAUSED BY IMPROPER DIET.

Dr. Minot reported a case of interest in relation to the diagnosis of infantile paralysis. A little girl, thirteen months old, who had been brought up on Mellin's food and Swiss condensed milk, had an attack of dysentery, followed by tenderness in every part of the body, especially the legs, and soon lost the power of moving the legs. When seen by Dr. Minot, three months afterwards, she was pale, delicate, very thin, the gums were spongy and black, the teeth (incisors) loose. She was intelligent, and could say a few words. The lower extremities appeared almost completely paralyzed, the only movement being a slight lateral one of the feet, and some flexion and extension of the toes. Irritation of the soles of the feet failed to produce reflex movement; irritation of the inside of the thighs, just above the knees, caused slight movement of the legs. The case strongly resembled one of infantile paralysis, but in view of the condition of the gums, and the general atrophy of the child, a change in diet was advised, together with iodide of iron and cod-liver oil. The medicine was not given, but the patient was fed with fresh cow's milk, bread, and broths. An immediate improvement took place, and the motion of the legs was soon restored. The child has since continued perfectly well, now for about three years.

Dr. Buzzard, who mentions a similar case in his Clinical Lectures on Diseases of the Nervous System, attributes the paralytic symptoms to a large quantity of uric acid in the blood, caused by the enormous amount of sugar contained in the diet. He thinks that minute crystals of uric acid are deposited in the connective tissue between the muscles, and cause so much pain as to render the muscles powerless.

Dr. Abbot remarked that when first introduced it was said of dialyzed iron that more than ten or fifteen drops was useless, but he had prescribed much larger doses with apparent advantage.

Dr. Ingalls said that he had always considered the tincture of the chloride by far the best preparation of iron, but within the past few years he had tried the dialyzed preparation, he thought with less good results. As to the excess of dose of the latter, was it not as with many other articles, the tincture of the chloride, for example; for after a few days the deep discoloration of the fæces had led him to think the doses larger than necessary.

HIGH TEMPERATURES AFTER LABOR WITHOUT OBVIOUS CAUSE.

Dr. Fifield spoke of the occasional occurrence of high temperature and pulse after labor, whether instrumental or unaided, where no definite cause could be traced and where no serious results had ensued, the patient meanwhile calling herself well and feeling no particular discomfort. Some of these cases seemed to be remittent with one or two days' interval. The last seen was given into his hands by Dr. Cutler. The patient, a primipara, thirty years old, had had a very hard instrumental labor. For several days the temperature continued at 104.5° F., and the pulse at 130–140, yet the patient perceived nothing amiss with herself. The lochia were not particularly offensive, and carbolized vaginal injections were frequently and regularly used. The lady was of a very nervous temperament. After these high figures had continued, with occasional remissions, for about twelve days, the pulse and temperature subsided and a good recovery followed.

Dr. Fifield said that he was at great loss to explain these symptoms. There was no septicæmia. Careful examination and inquiries revealed nothing otherwise abnormal. Dr. Fifield remarked that Dr. McClintock speaks of the great rapidity of pulse in some women after labor, the symptom having no particular significance.

Dr. Minot said that he had reported to the Society cases somewhat similar to those of Dr. Fifield. In each case the patient was of very nervous temperament.

Dr. Draper referred to cases reported by Teale, of Manchester, England, several years ago, of hysterical women in whom the temperature reached 122° F., in one instance verified very carefully.

Dr. Richardson stated that at the lying-in hospital there had been a number of cases where the temperature had run high for several days, with nothing to account for it except perhaps laceration of the cervix after severe labor. When the "surface" became normal and the laceration had healed the temperature fell; so distinctly, that it might be supposed that these

cases of high temperature had been due to some laceration.

DR. DOE said that in the *London Medical Times and Gazette* a case was recently reported in which the temperature after labor ran up to 106° F. The cervix was lacerated on one side. The uterus was washed out and the temperature fell immediately to 101° F., but rose again. The washing out was kept up for eight or nine days, the temperature rising to 104° F. in the intervals between the washings. Four days later, the washing having been discontinued, the temperature fell. The symptom was supposed to be due to the laceration alone.

THE INDUCTION OF LABOR.

DR. RICHARDSON gave the details of two cases of the induction of labor. One in a case of eclampsia where manual dilatation and version had been performed, the patient being delivered in a little over one and a quarter hours. The other in a patient in the last stages of phthisis where the labor had been induced by rupture of the membranes high up. Labor started up within five minutes after the escape of the liquor amnii.

DR. SINCLAIR remarked that the ease of dilatation was accounted for by the fact that the patient was a multipara.

In answer to Dr. Reynolds, Dr. Sinclair stated that he had performed manual dilatation with delay varying from five minutes to four hours, and declared that there was no bag in existence equal to his own finger. Manual dilatation was perfectly safe if the operator's head was steady and his hand proceeded accordingly. Nothing would take the place of the finger. If the operator jumped about and withdrew his finger and generally lacked steadiness of purpose, he would fail, and he would regret his failure.

DR. RICHARDSON stated his belief that Barnes' dilators simply start up labor. He had never seen any further effect from their use. In any case where the patient could take ether he would never use any means but manual dilatation. Dr. Richardson asked if it were not a fact that the cervix dilates by uterine pains when Barnes' dilators are used, and not by any dilating force exerted by the dilators.

DR. SINCLAIR observed that manual dilatation was being gradually and quietly adopted in England, and was resorted to a good deal everywhere. He said there were sometimes troublesome cases, and referred to that of a primipara at the eighth month, where dilatation occupied four hours and the woman died of secondary hæmorrhage at the end of twelve days. This was somewhat discouraging, but this was the longest time required he had ever met with. Tearing the cervix ought not to occur; one must use patience and wait till the parts are thoroughly soft and dilated.

HÆMOPTYSIS IN THE COURSE OF PUERPERAL SEPTICÆMIA.

DR. HOSMER reported the following case:—

A patient, something more than thirty years old, dated the commencement of her fourth pregnancy from October 25, 1882. Early in the following February she had a severe fall upon the ice, and on the 22d of the same month she noticed flowing.

She was first visited March 15th, and the usual precautionary measures were advised, but without avail, for ten days later, March 25th, the fœtus was expelled. A puerperal septicæmia was soon developed, and in connection with it there came a rather long succession of chills which were connected with thoracic trouble. There was severe pleuritic pain on the right side, condensation of the lung tissue over a small area in the middle of the right back, and hæmoptysis, which in varying degree continued for many days. The expectoration, effected without much cough, did not conform to the ordinary pneumonic standard, but contained a large proportion of fresh, bright blood. The question was as to the precise condition of the lung which occasioned the hæmorrhage. Reference was made to the *Boston Medical and Surgical Journal*, in which, in the issue of November 20, 1879, under the head of Phlebitis of the Lung, was reported a case that presented the same symptom which was thought to be an unusual one by reason of the conditions with which it was associated.

DR. FITZ said that he was under the impression that Dr. Wyman used the term as synonymous with thrombosis. Hæmorrhage is a frequent symptom of pulmonary embolism; persistent hæmorrhage would suggest abscess or gangrene during the progress of which the hæmorrhage continued. Hæmoptysis, however, is a result of embolism only in the case of the passage of relatively small particles into branches of the pulmonary artery — an obstruction of the primary branches of which results in sudden death — before the phenomena of hæmorrhagic infarction can occur. In the woman there was probably uterine thrombosis followed by pulmonary embolism.

JUNE 9, 1883.

METHOD OF MANAGEMENT OF FACE PRESENTATION.

DR. RICHARDSON reported two cases of face presentation in which delay had been occasioned by the head not being fully extended. The lack of extension being remedied, rotation had taken place and the children had been born.

ACUTE ECZEMA IN PREGNANCY.

DR. ABBOT reported the case of a primipara who during the first month of her pregnancy had become covered with an eczematous eruption, in size from a small point to a surface an inch in diameter, accompanied by considerable itching, here and there slight vesication, followed by furfuraceous desquamation of the cuticle, which was finally well in three or four weeks. Such a case is described by Dühring as a form of acute eczema. The patient received no treatment except a borax wash to relieve the itching. The whole body and extremities were covered by the eruption, which was supposed to be due to the suspension of the catamenia by pregnancy. The patient had never shown any sign of eczema before, except a slight irritation at times close to the alæ nasi.

PROLAPSE OF THE ANTERIOR WALL OF THE VAGINA DURING LABOR.

DR. LYMAN reported a case of delayed labor with this complication. As the head descended there lay in front of it what appeared to be the thickened anterior lip of the uterus, and which became thicker and thicker, resisted efforts to restore it, and was found to be the anterior wall of the vagina. This delayed the labor about an hour. For several days after the labor there were pretty decided symptoms of cystitis, but these passed off, and the patient made a satisfactory recovery.

Dr. Richardson said that he had seen the condition several times at the hospital or with the students, always in multiparæ and in women in a markedly debilitated condition, and preceded by trouble with the bladder which was in the fold.

Dr. Lyman said that the patient had had no trouble with her bladder previously. She had consulted him a year before for a very badly lacerated cervix and perinæum, and almost universal eczema, owing to which she was advised not to undergo operation. Under general treatment she improved, went home to Minnesota, got well of the eczema, conceived, and came on again to be confined. Dr. Lyman remarked that the case illustrated how well women get along sometimes with badly lacerated perinæum, cervix, etc., the cervix showing complete eversion. All the uncomfortable symptoms disappeared, and since her confinement the patient has been as well, almost, as any woman.

Dr. C. Ellery Stedman remarked that he had seen the same appearance, the vaginal fold being as thick as his thumb.

Dr. Green thought it strange that with prolapse of the anterior vaginal wall and a torn perinæum there was not more trouble. As to treatment, if the fold could be pushed up, that would be sufficient; otherwise, in his opinion, the forceps should be used at once.

Dr. Richardson remarked that version would be better, as avoiding a dragging down, with forceps included, of the very thing it is desirable to avoid.

Dr. Lyman said that if he had put in forceps he would have risked vesico-vaginal fistula; but he would not interfere unnecessarily.

Dr. Green observed that the head might be too low for easy version, and it was a fair question whether forceps or the continued pressure of the head were the worse. It seemed to him that the forceps might have been used, the perinæum being torn, if the head were depressed somewhat so as to avoid pressure against the anterior wall. Either one or the other process should be adopted rather than let the case go on a long time without aid.

Dr. Richardson observed that it should be recollected that in version a different diameter of the head is coming through the pelvis, and the rotation need take place only at the last minute.

Dr. J. L. Sullivan, of Malden, said he would like to call attention to the different experience of different physicians. He had had twenty-five hundred cases of labor and never a face presentation.

Dr. Richardson said that in the lying-in hospital three of the six cases of face presentation were in women with deformed pelves. In answer to a question by Dr. Lyman, he should think it was very seldom that a woman would suffer from hæmorrhage in case of low attachment of the placenta before the sixth or seventh month. He never would allow a case to go on without delivery if the child were viable.

Dr. Lyman gave an account of a case of immense suppurating unilocular ovarian cyst. The woman died twenty-four hours after ovariotomy.

Dr. Sullivan reported a case to which he had been called in consultation, and asked what ought to have been done. The woman was six and a half months pregnant, not for the first time. She had a convulsion, being in the advanced stages of Bright's disease. It was impossible to dilate the cervix in consequence of a whipcord like contraction during the hour or hour and a half of effort, but she was not under ether. Suddenly she became comatose, and died in ten minutes. The urine was scanty, moderately albuminous, and perfectly loaded with casts of all descriptions. There had been no uterine action. In another case, not long ago, Dr. Sullivan succeeded in dilating and inducing labor, and everything went on well.

Dr. Richardson suggested that the uterus might have acted differently under complete anæsthesia.

Dr. Sullivan questioned further what course should have been pursued had ether been administered without result. The question propounded was this: What ought to be done in such a case provided a whipcord constriction persisted after bleeding and etherization, or any other suitable means, had proved useless in causing relaxation and dilatation. In the case related the patient suddenly died just as ether was brought into the room. The remarkably feeble pulse and feeble condition of the circulation led him, right or wrong, to postpone venesection until the effects of ether had first been ascertained. Before ether could be procured death occurred, probably from cerebral hæmorrhage.

The question actually propounded, or intended to be propounded, by him was this: Would it be proper to deeply incise the os uteri in such a case should the whipcord constriction of the internal os persist after bleeding and ether had been pushed to the full extent of safety. In other words, the inquiry relates to a *hypothetical* case, the possibility of such having been suggested by an actual one.

Dr. Abbot observed that it was well known that apoplexy was a not uncommon result in such cases, and if it was the cause of the symptoms in the one reported nothing could probably have been done to relieve it. He had had a patient, however, a boy, who was comatose, completely, for a week, in the course of Bright's disease, and recovered entirely so far as the coma was concerned.

Dr. Sullivan remarked in regard to venesection that it was contra-indicated, yet if the patient had lived and the ether had failed he would have bled. As to the condition of the cervix he could dilate so far, but no more, with repeated efforts.

NEW YORK STATE MEDICAL ASSOCIATION.

The New York State Medical Association has just issued in pamphlet form a report of the proceedings of the convention held in the city of Albany February 4 and 6, 1884, at which the Association was organized on a permanent basis, together with a list of founders, representing the various counties of the State, to the number of 168.

THE CANVASS OF THE STATE. THE "CODE" QUESTION.

At the first meeting, February 4th, Dr. Gouley made a report of the canvass of the State which had lately been completed. In regard to the circular which had been sent to every member of the regular profession in the State, so far as known, the following figures were given: —

The proof is found to contain the names of	5219
Since the appearance of the proof new names have come in to the number of	67
Total, carried to next page	5286

Which number, added to the original, gives a total of	5286
Since the beginning of the canvass there have died	83
	5286
Number of names stricken off from other causes	201
Leaving a total (given in the corrected catalogue) of	5002
Number of those who have not expressed their preference	1142
Total number of votes recorded	3860
For the National Code (corrected number)	2547
For the "New Code" (corrected number)	1040
For no Code (corrected number)	239
Unclassified (corrected number)	34
Total	3860

The canvass of the State Medical Society showed the following figures: —

For the National Code	193
For the "New Code"	134
For no Code	19
Uncommitted	36
	382

In some remarks on the report of the canvass Dr. Gouley urged speedy action in the formation of a separate association on the ground that there was not the least chance that the National Code of Ethics would be reënacted by the Medical Society of the State of New York as long as a two-thirds majority was required. There was not a two-thirds majority, and he did not believe such a majority could be obtained in five years or more.

DR. FLINT'S ADDRESS.

DR. AUSTIN FLINT, SR., made an eloquent address, in which he gave the recent history of the conspiracy which culminated in the adoption of the New Code by the State, and which first publicly made its appearance in the medical law of 1880, and also some account of the measures taken to counteract its baneful influence. It opened as follows: "It is more than a year since I have publicly spoken to an audience of friends on the questions which have at last divided the medical profession of the State of New York. As you all well know, thus far the battle-field in the warfare against the honor and dignity of the profession has been mainly in the city of New York. In the city of New York the conspiracy which brought about this deplorable conflict that has been forced upon us, had its inception. The attack upon the most sacred traditions of our profession was there made with a malignant rancor that can only be fully appreciated by those who have been personally involved in this unhappy contest. I say it in all modesty, but we of the city of New York come before you as veterans from the front, bearing scars. If we venture to offer suggestions with regard to future action, if we beg you to learn a lesson from our experience, it is because we are unhappily too familiar with the arrogance and the unscrupulous methods of our enemies within the profession. Our experience teaches us that but one course is now open to those who are unwilling to remain in the false and humiliating position in which we are placed. The proper course is for us to organize a new State Association, to be composed exclusively of those who refuse to countenance professional relations with irregular practitioners."

The address was concluded in the following words: "The issue has been forced upon us. We stand in the actual fact of a divided profession. The State Society and Society of the County of New York have seceded from the regular profession of the United States. We made no movement looking to the formation of a loyal State Association until the most vigorous efforts to redeem the existing societies had signally and hopelessly failed. We are now cast out of fellowship with the regular profession of this great country, as represented in the American Medical Association and in the medical societies of other States. We must redeem the State of New York. There remains but one course to pursue, and that is to form an association of our own. The bitter fight, the disgraceful spectacle of a contest between members of a devoted and honorable profession, are things of the past. The war is ended. Let us organize and live together in peace, working hand in hand for the advancement of the science of medicine. Let the men who are so blind or so misguided as to think their course is right, or who cannot resist the temptation to take tribute from those who persist in supporting the enemies of truth and of our universal science of medicine, go their own way and consult on terms of equality with any and all 'legally qualified practitioners of medicine,' whatever form of charlatanism they may assume! I hope, Mr. Chairman, that a New York State Medical Association will be organized to-night in affiliation with the regular profession of the United States; that the existing county societies whose membership is loyal will put themselves at once in affiliation with the new State Association; and that in counties in which the existing societies cannot be brought in bodily new associations will be promptly organized, to be composed exclusively of members of the profession who uphold the National Code of Ethics."

PLAN OF ORGANIZATION.

The plan of organization adopted provided: (1.) That the State should be divided into five geographical districts. (2.) That a nominating committee of eleven members should be created. (3.) That the nominating committee should name the various officers, subject to the approval of the Association, and also two members from each district, who, together with the titular officers and one member appointed at large by the President-elect should constitute the Council for the management of the affairs of the Association. (4.) That the Council should complete the organization, prepare a constitution and by-laws, in accord with this plan, to be presented at the next meeting of the Association, and file articles incorporating the New York State Medical Association and also county associations as branches of the latter. . . . (8.) That the initiation fee should be five dollars, and the annual dues three dollars. (9.) That the Code of Ethics, which should form an integral part of the By-laws of the Association, should be the same as that adopted by the American Medical Association. (10.) That the Association should hold annually one session, which should last three days or more.

A resolution was also adopted to the effect that all physicians in the State of New York who were in good standing in the present county societies, and who subscribed to the Code of Ethics of the Association, could become members thereof upon paying the initiation fee and signing the Constitution and By-laws.

MEETING OF THE COUNCIL.

At a meeting of the Council held after the adjournment of the Association, Drs. A. Flint, Jr., J. W. S. Gouley, and N. C. Husted were appointed as a special

committee on the preparation of a constitution and by-laws for the Association. Dr. A. Flint, Jr., Dr. Van de Warker, and Dr. Gouley were appointed a committee to secure the coöperation of a medical journal in sympathy with the wishes and interests of the Association.

On motion of Dr. Van de Warker it was resolved that the members of the Association should be designated Fellows, and Drs. E. M. Moore, A. Flint, Jr., and the Treasurer, Dr. J. H. Hinton, were appointed a committee to prepare a seal for the use of the Association and a form of certificate of fellowship.

Recent Literature.

Opera Minora, A Collection of Essays, Articles, Lectures and Addresses, from 1866 to 1882, inclusive. By Edward C. Seguin. New York: G. P. Putnam's Sons. 1884. x., 687 pages.

Dr. Seguin has been a voluminous writer, has done much to bring to the notice of the profession the latest results of research in nervous pathology and therapeutics, and has himself aided in the extension of our knowledge. His papers and reported cases are to be found in many medical periodicals, scattered widely and not always easily accessible. It is, therefore, a satisfaction to have them collected in one volume.

About eighty essays, etc., are reprinted, beginning with three published while Dr. Seguin was house physician of the New York Hospital. The majority of the subjects either relate to or are closely allied to the nervous system; one of the earliest of these is a paper in regard to aphasia published in 1868, which is one of the longer articles. Among the more important subjects may be mentioned Description of a Peculiar Paraplegiform Affection (tetanoid paraplegia), the first cases of spastic spinal paralysis reported as a distinct affection. Contribution to the Study of Localized Cerebral Lesions and a second article on the same subject. Lecture upon the General Therapeutics of the Nervous System. A paragraph at the close of this lecture is well worth quoting, "Let me close this rather fragmentary lecture, by calling your attention to something which is not wholly extra-medical. I allude to the care of your patients' spirits, their emotions and fancies if you will. Never let *alarm* be one of your medicaments. If necessary, in order to bring about a reform of bad habits, lay the picture of consequences before your patient truthfully, but not in the language of exaggeration. Even in hysterical cases you need not be so frank as to hurt your patient's feelings; it will often do if her relatives know precisely what you think of the value of the symptoms. In cases of mental disorder, pray do not forget that even very maniacal or melancholic patients attend to and remember all your words and actions, and will treasure any kind and careful behavior of yours as well as bitterly recall any unkind or hasty phrases and acts. As a general therapeutic rule, I would have you be as anxious to avoid wounding the sensibilities of your poor or wealthy patients as of injuring their tissues."

There are eight lectures on the Localization of Spinal and Cerebral Disease, several articles on the diagnosis of different diseases, and the importance of an early diagnosis. The papers relating to the value of certain drugs and the dosage in treatment of nervous diseases are well worth reading.

Many interesting cases will be found reported in more or less detail.

Of course the different papers vary in importance and in value, there may be some statements which the author would now modify if he were writing on the subject again; but there is much of permanent value in the book, apart from the interest to be found in it as the record of the mental and professional growth of one of our foremost neurologists.

Transactions of the American Gynæcological Society, Vol. 8, for the year 1883. New York: D. Appleton & Co.

This volume appeared with commendable promptness less than four months after the meeting of which it is the report. We regret to see that in the change of publishers, whether inadvertently or intentionally, the color of the paper has been changed from that of the preceding volumes to one several shades nearer to a pure white: the typography of the title page is also changed, not to our taste for the better.

The President, Dr. Gilman Kimball, gave as his annual address A Biographical Sketch of Dr. Nathan Smith, Founder of the Dartmouth Medical College, who was the second in this country to perform ovariotomy successfully. As Dr. Smith was at the time unaware that McDowell had operated at all, his operation was "as truly original as the first" although performed nine years later. Ephraim McDowell is certainly to be regarded as the "father of ovariotomy" in point of time; but Dr. Kimball pleads with much justice that "in point of absolute merit Nathan Smith is entitled to the same honor as that accorded to McDowell."

Dr. R. S. Sutton's paper on Cleanliness in Surgery shows how generally the principles of Listerism have been adopted, although all surgeons do not accept them in their entirety. To the greater attention to cleanliness and the avoidance of contamination of wounds, brought about by Lister's teachings, are to be ascribed the greater measure of success in the surgery of the present day.

Dr. A. H. Smith calls renewed attention to the great value of hot water in secondary hæmorrhage after pelvic operations, especially in plastic operations, even when the bleeding occurs from moderately large vessels. The water should be at a temperature of 115° to 120° F., and to be most efficient should be carried directly to the bleeding surface. As operations are sometimes lost by the supposed necessity of cutting stitches in order to reach and tie bleeding vessels for secondary hæmorrhage, the efficiency and easy application of this hæmostatic should not be forgotten.

Dr. C. D. Palmer contributes an excellent paper on the ætiology and treatment of dysmenorrhœa, in which he expresses the belief, now held by many gynæcologists, that, although undoubted cases of so-called obstructive dysmenorrhœa do sometimes occur, painful menstruation is essentially a neurosis. Organic disease may or may not be associated with dysmenorrhœa; but the neurotic condition is the only feature in most cases. This condition is generally an expression of a disordered or highly developed nervous system: treatment should therefore be directed to the constitutional disorder, and local treatment be resorted to only when general treatment has failed.

Dr. E. W. Jenks suggests a New Method of Operating for Fistula in Ano which he has twice employed with complete success. The method is briefly as follows: The fistulous tract is incised in the usual way, care being taken to incise the muscular fibres of the sphincters at right angles. The pyogenic membrane is then carefully dissected out, bleeding vessels secured by torsion or ligature, and the parts thus laid open are then closed with deep sutures much in the same way as in the operation to close a ruptured perineum. Dr. Jenks does not claim that this method is applicable to every form of anal fistula; but he believes it to be the best method in a majority of cases. The advantages of the method are that a long convalescence is avoided, union is secured by first intention, and subsequent incontinence prevented.

Dr. C. C. Lee contributes a paper of great interest on the Management of Accidental Puncture and Other Injuries of the Gravid Uterus as Complications of Laparotomy. Nothing can be more appalling to the operator than to plunge a trocar into the gravid uterus, thinking it to be an ovarian cyst; yet this accident has happened to careful surgeons. Dr. Lee shows, however, that this accident is not necessarily followed by abortion, especially if the ovisac is not opened: he also formulates the treatment that should be pursued according to the nature of the injury.

Dr. R. B. Maury's paper on Rectal Disease Considered in its Relations to Disorders of the Uterus is an inquiry as to what extent certain morbid affections of the rectum are due to uterine disease. Since "the rectal, uterine, and vesical circulations are parts of one and the same vascular system," it is easy to see that any important disturbance in the nutrition of one of these organs must have a marked effect on the others; and Dr. Maury illustrates this effect by cases under his observation.

The remaining papers are by Dr. Johnson on Superinvolution of the Uterus; Dr. Reamy on a Rare Form of Abdominal Tumor; Dr. Campbell on Congenital Fissure of the Urethra, with Exstrophy of the Bladder; Dr. Jackson, Is the Extirpation of the Cancerous Uterus a Justifiable Operation?; Dr. Emmet, A Study of the Ætiology of Perineal Laceration, with a New Method for its Proper Repair; Dr. Byford, Remarks on Chronic Abscess of the Pelvis; and Dr. Engelmann, Ergot: the Use and Abuse of the Dangerous Drug. Dr. Barker's memoir of the late Dr. James Dowling Trask concludes the volume.

We are sorry that it has seemed good to the Society to omit the valuable index of gynæcological and obstetric literature which has previously found a place in these Transactions, and hope that the omission is only temporary. C. M. G.

Practical Pathology: A Manual for Students and Practitioners. By J. SIMS WOODHEAD, M. D., F. R. C. P. E. Edinburgh: Young J. Penthead. 1883.

This work is intended rather as a guide in the preparation of specimens for microscopic examination than as a systematic treatise on pathology, and as far as it goes is admirably adapted for its purpose.

The first part of the book is devoted to a description of the modern methods of preparing and coloring tissue. The value of the aniline colors for differential staining is prominently brought forward, and numerous formulas for their use are given.

The principal organs of the body are considered in the second part, commencing with the liver. A description of the normal histology is first given, and then follows a consideration of the most ordinary changes, which are met with. Then the methods best adapted for the preservation of each particular specimen for microscopic examination are dwelt upon; and lastly the appearances as seen under the microscope. These last are illustrated by beautifully colored plates, which add greatly to the attractiveness of the book, as well as giving an admirable idea of how really good sections should look when properly treated and colored.

The importance of always associating the gross appearances with the histological changes is a practical point strongly insisted upon by the author, and one often overlooked. For it is hard to realize that the aggregate of such slight changes as can be detected in the ultimate constituents of an organ can give rise to such marked differences in its color, size, or shape when regarded as a whole.

The book will be of value to those who wish a ready reference for practical work, and who have only occasional opportunity for it. It is to be feared, however, that the style in which the work is issued will enhance its cost so much that it will place it beyond the reach of many to whose library it would be a welcome addition.

An American edition of this work has just been issued by Henry C. Lea's Son & Co., which shows a little the wear of its English predecessor, but which from its lower price will probably be more popular.

Bacteria. By DR. ANTOINE MAGNIN and GEORGE M. STERNBERG, M. D., F. R. M. S. New York: Wm. Wood & Co. 1884.

The first part of this book is a translation of Dr. Magnin's work, and gives the classification of bacteria, from a botanical point of view, as presented by Cohn. This part of the book has value as affording a means of identification of the different forms that come under observation. The morphological characteristics of these parasites are now recognized to be of very uncertain value since the great variation in form under different conditions of growth has been discovered. This is fully recognized by the author, who devotes considerable space to a consideration of their physiological action and its value in determining species.

The latter part of the book is devoted to a résumé of the work done upon each of the diseases with which the micro-organisms have been found to be associated. With this is joined some original investigations undertaken by Dr. Sternberg, which, however, are so incomplete as to fail to carry conviction that all sources of error were excluded. There is also a marked tendency on his part to see in any rather indefinite form described by others a close resemblance to a micrococcus discovered by himself in a form of septicæmia produced by inoculating rabbits with human saliva. This has not been accepted as yet by the most competent observers as differing essentially from other forms of septicæmia following the introduction of putrefying substances.

At the end of the book is a very valuable and complete bibliography of the works on these minute parasites.

Medical and Surgical Journal.

THURSDAY, MARCH 20, 1884.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

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THE DRUNKARD AND THE DOCTOR.

"FOR the gentlemen of the faculty of physic, I must frankly own that I see no special reason, why they in particular should apply themselves to the study of the law; unless in common with other gentlemen, and to complete the character of general and extensive knowledge; a character which their profession beyond others has remarkably deserved. They will give me leave however to suggest, and that not ludicrously, that it might frequently be of use to families upon sudden emergencies, if the physician were acquainted with the doctrine of last wills and testaments, at least so far as relates to the formal part of their execution."

Such was the opinion of the learned Blackstone as expressed in his lectures at Oxford one hundred and thirty years ago, and we have no desire to express a contrary opinion. We doubt if a little knowledge of the law is any less dangerous than a little knowledge of medicine. But certainly we believe, and no one will deny, that it is desirable for a physician to consider how his actions would appear in the eyes of twelve individuals selected at random from his peers. Every surgeon, certainly, though gifted with but a sluggish imagination, must sometimes picture himself as a defendant before an intelligent jury and his now grateful patient transformed into an indignant plaintiff. It is not wholly superfluous to consider some of the possible conditions in which the vagaries of a jury may be perilous to the doctor's pocket and peace of mind. He who has considered beforehand will act most intelligently when action becomes necessary.

In what follows there is no desire to interpret law, but simply to suggest some unusual questions that may be presented to the surgeon at any moment and the possible position that may be taken by a jury in reference to them.

Not long ago a drunken man was the victim of a severe accident to his arm which necessitated amputation. He had suffered a compound fracture with severance of arteries and nerves. The arm hung only by ribbons of the soft parts, and the venous hæmorrhage was restrained with difficulty. The accident had not entirely sobered the unfortunate. He had no friends with him at the time of the accident, and it could not be found that he had any relatives in the city. The necessity for amputation seemed evident to any man in his senses, but the operation was persistently refused by this inebriated individual.

The man had the appearance of one able to comprehend the true state of affairs could he only be allowed time to return to himself, but the venous hæmorrhage was so great and so difficult of control that delay was impossible; it was immediate amputation or death. In this instance the surgeon proceeded with his preparations, and received at last a somewhat reluctant consent to be sure, but one that justified him in the necessary action. But the refusal was sufficiently delayed to raise the question how far the surgeon may proceed in opposition to the will of a patient whose reasoning powers are temporarily destroyed by the effects of alcohol.

It is an axiom in surgical practice that no operation, not even the slightest, can be performed against the will of the patient or his or her guardian. It is the surgeon's duty to advise whatever procedure may be necessary, but before doing any operation it is imperative that he shall receive consent. If he does otherwise he invades the right of the individual and lays himself open to a criminal charge for assault or to a civil suit for damages. If a man deprived of his senses by a fracture of his skull were taken to a hospital, the surgeon would be justified in doing what seemed necessary; if he retained his senses sufficiently to remonstrate nothing could be done without the consent of friends.

Were the patient entirely deprived of his senses by alcohol, in other words dead drunk, possibly the surgeon might be justified in removing an arm so evidently destroyed as the one described above, especially where his inactivity would be so manifestly the cause of death. In such a case the law would demand of him only the exercise of ordinary judgment and skill if he chose to act, though we doubt if it would hold him responsible if he refused. Certainly he would run some risk in either case of being called before a jury to answer for his judgment. If the case will admit of delay there is no doubt the individual should be allowed to regain consciousness. Only in the plainest case and after all possible precautions in the way of consultation and explanation to by-standers should the surgeon snip the few shreds of skin that connect the crushed member with the body.

Were the patient only deprived of his reasoning powers, and did he protest against what seemed to him mutilation, however evident his drunkenness no surgeon would be justified in touching him. He might advise and entreat, and perhaps threaten, but further than that he could go only at his peril. A merely drunken person does not lose his responsibility for his own acts. Responsibility presupposes the ability to choose one of two lines of conduct, and inferentially the right to accept or refuse medical aid for himself. He may be held responsible for the failure to provide such aid for those under his care but not for himself, and any one who dared put in force the most evident principles of surgery should expect to find himself face to face with a jury worked up to frenzy at so evident an outrage on the independence of an individual.

Any person must interfere to prevent an active at-

tempt at suicide, but to prevent the passive suicide above mentioned is an entirely different matter.

Would the case be different were it known that the drunkenness was the result of alcohol administered feloniously, and not absorbed by the free will of the sufferer? No matter how benevolent the surgeon nor at what sacrifice of personal comfort he may act in regard to the matter, we doubt if he would be upheld by a jury in supposing that his unfortunate patient had lost any portion of his right to decide on the acceptance or rejection of surgical advice. That he had been the victim of rascality to such an extent as to deprive him of his senses would not justify any one in infringing on the right to resist mutilation.

Does the medical aspect of the case differ from the surgical? Would a physician be justified in administering by force an emetic to a drunken man who has been accidentally poisoned, in the absence of his friends, in spite of the man's remonstrances? Certainly the act is quite as much an infringement of his personal liberty as the surgical procedure, and we feel sure a jury might so regard it. Were the emetic administered by a subcutaneous syringe the case would approach nearer the surgical basis, and might well be regarded as an aggravated assault, though perhaps the absence of mutilation would make the offense less rank in the jurors' nostrils.

A drunken woman, dangerously flowing, might well regard the physician's attempts to determine the cause of the hæmorrhage as an assault; and it is already an established principle that the consent of a woman must always be obtained before an examination. Were a woman who had been examined when insensible from drink to learn of it and resent it afterwards might not a jury be brought to regard the procedure as an aggravated assault, that the physician had taken advantage of the woman's condition to do something he would not have dared to do had she retained her senses?

The conclusion of the matter is simply to emphasize the necessity on the part of medical men of respecting to the uttermost the rights of individuals. Such a combination of circumstances as we have mentioned will rarely happen; ordinarily the presence of friends will take the burden of responsibility from the surgeon's shoulders. Should such a case as has been mentioned present itself the surgeon will do well to follow the principles we have laid down. Possibly it may seem inhuman to allow a man to die simply because he is drunk. It seems inhuman to allow people to die simply because they are too ignorant to accept wise counsel, but it is sometimes inevitable. Every individual has the right to bear his congenital deformity unrelieved, his unsightly growth unremoved, to bear his pain without an opiate, to leave his fractured bones to unite as they will or not at all, to die with his crushed limb unamputated if he chooses; his diseases and his life are his and not the doctor's. One can as little force a man to follow a certain line of conduct in regard to his own health, if he does not to injure others, as in regard to religion.

stain. Were doctors infallible, were the practice of medformula

icine restricted to those fitted to undertake it, the case might be different; but in a community where so little distinction is made between doctors who have fitted themselves for the practice of the profession and those who arrogate to themselves the title it is proper that their powers should be carefully circumscribed.

SHALL THE UNITED STATES PHARMACOPŒIA BE THE LEGAL STANDARD FOR DRUGS IN MASSACHUSETTS, OR SHALL IT BE SOME ONE OF SEVERAL COMMENTARIES OR DISPENSATORIES?

IT is reported in the daily journals that a majority of the present Legislative Committee on Public Health, apparently influenced by certain wholesale druggists of this city who have been prosecuted by the State Board of Health, Lunacy, and Charity for selling adulterated drugs, intend to report a bill amending the present Adulteration Act. They would make that one of the several excellent commentaries, which have been published as private enterprises, which its authors have seen fit to entitle the United States Dispensatory, the legal standard in Massachusetts for all the medicines mentioned therein instead of the United States Pharmacopœia itself upon which it is based. Any such change in the law would be very disastrous, and we shall presently give a few of the many reasons why it should not be done, but in this connection it will be proper here first to consider by what authority the United States Pharmacopœia and the particular commentary thereon, entitled the United States Dispensatory, have severally been prepared.

The United States Pharmacopœia is the official code for the preparation of medicines issued by the authority of a national convention for its revision composed of not more than three delegates sent by the several incorporated medical societies, medical colleges, colleges of pharmacy, and pharmaceutical societies throughout the United States, the American Medical Association, the American Pharmaceutical Association, the Surgeon-General of the Army, of the Navy, and of the Marine Hospital Service, which has met at Washington, D. C., every ten years since 1820. It has thus a national origin as far as possible, not being the direct act of the national government itself. It has, however, received the authoritative sanction of the national government, at least ever since the act of Congress entitled An Act to Prevent the Importation of Adulterated and Spurious Drugs and Medicines, approved 26th June, 1868, when it was made the United States Treasury Department standard by which all imported drugs and medicines were to be tested in reference to strength and purity. Moreover, an act is even now pending before Congress to make it the standard in a national adulteration law almost identical with the present law in this State. In 1881 it was made the standard under very similar laws in New York and New Jersey, and subsequently in Louisiana.

In January, 1833, Drs. George B. Wood and Frank-

lin Bache, both of Philadelphia, and members of the Convention for the Revision of the Pharmacopœia in 1830, issued their private copyrighted work, which they were pleased to entitle the United States Dispensatory. In its preface they said, "We have, moreover, a national pharmacopœia which requires an explanatory commentary." "On these accounts it is desirable that there should be a Dispensatory of the United States." "But though precedence has been thus given to the Pharmacopœia of the United States those of Great Britain have not been neglected. Therefore, as it itself says, "the United States Dispensatory may very properly be considered as a commentary upon the United States *and the British Pharmacopœias*," and making the United States Dispensatory the legal standard would make the British Pharmacopœia equally with the United States Pharmacopœia the legal standard in this State.

As, however, it is only one of three very excellent commentaries upon the United States Pharmacopœia which have thus far been published as private undertakings it seems, indeed, a very strange idea to place this one in authority over and above the very work upon which it is itself based. Why should this particular commentary by Wood and Bache be thus honored rather than either one of the other two, the so-called National Dispensatory by Drs. Stillé and Maisch, likewise of Philadelphia, or the still later work, The Companion to the United States Pharmacopœia, by Drs. Oldberg and Wall, which has been just issued by the publishers of the United States Pharmacopœia itself? In short, the motive for this attempt to replace the present legal standard, which is the work of a representative national convention, on the sales of which, moreover, the compilers do not receive one cent of personal gain, — for the royalty of forty cents upon each copy sold, which is paid their committee of publication by the publishing house, is devoted entirely to the *repayment of only the actual expenses incurred* by the members of that committee in their work upon the Pharmacopœia itself, — is not *at first* apparent.

As merely a commentary upon the Pharmacopœia all the authority the Dispensatory has is naturally based upon that work, and it must therefore be subject to a revision at the least as often as is that work itself. Unlike the Pharmacopœia, however, which can have its standards changed only once in ten years, and that by the act of the majority of the national convention of delegates representing the wishes of the medical and pharmaceutical interests of the entire country, all the various dispensatories, as the private property of their authors, are subject to change any time at the will of one or two men. As also all three of the commentaries or dispensatories are more costly works than the Pharmacopœia, any one of them being made the legal standard would be a source of increased expense to the public and to druggists, as well as put us out of accord with the laws in other States.

A much more vital objection (and here probably is to be found the motive for changing the legal standard) as regards the efficient execution of the law is this, that with the Pharmacopœia as the standard the all-important question of exactly what is the legal standard is capable of much more easy solution than it would be were any one of the several dispensatories the standard. This is plainly seen by taking for example the much discussed subject of the legal strength of tincture of opium or laudanum. According to the United States Pharmacopœia, 1880, one hundred parts by weight of the tincture of opium is made up by exhausting ten parts of powdered opium with diluted alcohol. The powder itself to yield not less than twelve or more than sixteen per cent. of morphine when assayed by the prescribed method of assay. Consequently the tincture must contain at the least one tenth of twelve per cent., that, is one per cent. and two tenths of morphine by weight. This is a standard requirement about as definite as language can well express. How different, however, would it be with the latest edition of the United States Dispensatory as the standard. There "one ounce av.," is to be made up into "ten fluid ounces of the tincture." What is here the minimum standard percentage weight of morphine in a tincture which by experience has been found to range in specific gravity all the way from 0.920 + to 0.990 +? No one can assert positively what it is. Even this Dispensatory itself does not attempt to express any definite results, but says that it would be "*about*" or "*nearly*" thus and so. No convictions, as those who are trying to bring about this change well know, could ever be gained upon the charge of having violated any such indefinite standards. But the trouble that would result from the change does not even end here, for the United States Dispensatory as a commentary treats not only upon the last revision of the United States Pharmacopœia, and the one before it, and in like manner upon the British Pharmacopœias, but also in many cases upon the French and German pharmacopœias. Out of such a large selection of standards, more or less indefinite, according to the various pharmacopœias, — for these several foreign pharmacopœias would then become law in Massachusetts, besides many an unofficial formula, — it would become well nigh useless to attempt any enforcement of the law.

This is just the end which is sought for by those who have felt the disadvantage of the present more definite standard. Having rid themselves of this trouble they are very willing that the rest of the act should remain unaffected, as it would have been rendered perfectly harmless against adulterations. No valid reason can be given for the desire to make the commentary the legal superior of that upon which it comments. Surely any private commentary upon a statute is not superior to the statute itself.

— The eighth annual meeting of the New York State Veterinary Society was held at the Ashland House March 11th, with Dr. A. F. Liautard in the chair, when the draft of a bill regulating the practice of veterinary medicine and surgery was discussed and finally referred to the executive committee. Dr. Liautard was reëlected President of the Society.

MEDICAL NOTES.

— Dr. Alfred Hosmer, of Watertown, has resigned his position as one of the medical examiners for Middlesex County. Dr. Julian Mead has been nominated as his successor.

— Dr. Francis M. Gunnell has been appointed Surgeon-General of the Navy. He is a native of Washington and has had thirty-five years of service in the medical corps, nearly half of that time having been spent at sea. The new incumbent is highly spoken of, though it is to be regretted that Surgeon-General Wales, under whom the medical service of the navy had taken such a high position for efficiency, should have failed of reappointment.

— The formula of Tamar Indien, the agreeable and convenient laxative, is announced (Report de Phar., July, 1883) as follows: —

℞ Tamarind pulp	450 parts.
Powdered sugar	40 parts.
Powdered sugar of milk	60 parts.
Pure glycerine	50 parts.
M. Evaporate to consistence of soft extract.	
Add	
Powdered senna leaves	50 parts.
Powdered anise	10 parts.
Essence of lemon	3 parts.
Tartaric acid	3 parts.
M. Divide into 100 boluses. Steam them, and roll in the following mixture: —	
Cream of tartar	5 parts.
White sugar }	āā 35 parts.
Sugar of milk }	
Tragacanth	2 parts.
Tartaric acid	2 parts.
Powdered red sandal	25 parts.
Dry and put up in tin foil.	

— During the past twelve months Dr. John Homans has performed ovariotomy twenty-seven times without a single death.

— An interesting testimony to long-continued, faithful medical service transmitted from sire to son is afforded in this picture drawn by the *Canadian Medical Journal* of a doctor's door: —

"Grandfather, father, and son have been in the old stand so long that to the inhabitants of the locality the doctor's house is amongst the things which have always been. The patients' entrance is on a side street, and a small porch protects the visitor. The steps are well worn, and the native grain is everywhere visible in the wooden surroundings. There is neither bell nor knocker, and the door presents interesting, and, so far as we know, unique evidence that votaries to this Æsculapian shrine have not been lacking. On the panels, at different heights, are three well-worn places where the knuckles of successive generations of callers have rapped and rapped. The lowest of the three, about three feet from the floor, represents the work of 'tiny Tim' and 'little Nell,' so often the messengers in the poorer families. Higher up and of less extent is a second depression where 'Bub' and 'Sis' have pounded, and highest of all, in upper panel, a wider area where the firmer fists of the fathers and brothers have, as the years rolled on, worn away the wood to nearly half its thickness."

In unpleasant contrast with the simple dignity of such a symbol as this of the good physician's home are those doctors' signs which the same journal describes as so common in Canada, the representations of the commercial spirit in medicine. For instance, the writer speaks of metallic door-plates two feet square, with letters five inches high, bearing an inscription like the following: "Dr. ——, M. D., Edinburgh. (Honors) M. R. C. S., Eng., L. A. H., Dublin."

NEW YORK.

— The ninth annual commencement of the American Veterinary College was held at Chickering Hall on the evening of the 4th of March. The graduating class, of which Hamilton Vruland was the valedictorian, numbered twenty-two members, and the address to the class was delivered by the Rev. Dr. John P. Newman.

— The commencement exercises of the New York College of Dentistry were held at the same place on Thursday evening, March 6th, when the valedictory address was delivered by George J. Neish, of the Island of Jamaica, and the address to the graduates by the Rev. Dr. Howard Crosby. The class numbered forty-one.

— A project has been set on foot for the founding of a hospital and clinic for the treatment of cancer cases exclusively. A board of managers, composed of five ladies, five physicians, and five laymen, has been organized, with Mr. John E. Parsons as president, and Mr. Joseph W. Drexel treasurer, and it is said that the sum of $250,000 is already promised for building purposes provided that $100,000 more can be raised for the purchase of suitable land. The five medical members of the board are Drs. Hunter, Cleveland, Kinnicutt, Peabody, and W. T. Bull.

— Dr. Joseph E. Janvrin has been appointed gynæcologist to the New York Skin and Cancer Hospital *vice* Dr. James B. Hunter, resigned.

— The annual commencement exercises of the Medical Department of the University of the City of New York were held at the Academy of Music, Tuesday evening, March 11th, the Rev. Dr. John Hall, Chancellor of the University, presiding. The degree of M. D. was conferred on 164 graduates, and the usual prizes and honors were awarded. The valedictory address was given by F. K. Perkins, and the address to the graduating class by the Hon. Chauncey M. Depew.

— The Bellevue commencement was held at Steinway Hall on the evening of March 13th. The graduating class, of which there was no valedictorian, numbered 149. It was announced that positions upon the house-staff of Bellevue Hospital would be given at once to the four students standing highest in scholarship, and that the next four in order of merit would be appointed on the staff as soon as vacancies should occur. Among the first four was Reginald H. Sayre, younger son of Prof. Lewis A. Sayre. The address to the class was delivered by the Hon. Algernon S. Sullivan.

— The State Board of Health met in New York, instead of Albany, on the 12th of March. The report of a sub-committee appointed to inquire as to the poisonous nature of water gas was received and adopted, but it was announced that its contents would

not be made public until after it had been submitted to the Legislature. By request, Professor Chandler made some remarks on the subject, in the course of which he said that while water gas contained three times as much poisonous carbonic oxide as coal gas, it was practically no more dangerous than the latter. Those asphyxiated by coal gas would die just as surely as the victims of water gas poisoning, although a little longer time would elapse before the fatal result was reached. He believed that the reason why there were more cases of suffocation from water gas than coal gas was simply because in the places where these accidents usually occurred, such as hotels and apartment houses, more water gas was used. Water gas, he said, was now used by half the people in New York, and it furnished fifty per cent. more light than coal gas for the same price. The administration of the food and drug laws was considered and referred to the public analysts, who will agree on a definite plan of action to be submitted to the board for approval. A bill appropriating $20,000 to the board to assist in preventing adulterations is now before the State Senate. Dr. Alfred L. Carroll, of West New Brighton, Staten Island, was elected secretary of the board, in the place of Dr. Elisha Harris, deceased.

— The report of the State Board of Health to the Legislature, in regard to water gas, was made on the 14th of March, and was to the effect that, judging from such investigation as they had been able to make, of the subject, this was not more dangerous or detrimental to health than any other illuminating gas.

— Dr. Whitman V. White has been elected corresponding secretary of the New York County Medical Association. The recording secretary is Dr. E. A. Judson, who was the Old Code candidate for that position at the last election in the County Medical Society.

— Another fat girl, Jessie Reed, died at Buffalo, where she had been on exhibition at Bunnell's Museum, on the 12th of March. She was twenty years old, six feet and four inches in height, and weighed four hundred pounds. She had been married for two years, and leaves one child, six months old. Her remains were brought to Greenpoint, Long Island, where her parents live, and the coffin is said to have measured six feet seven inches in length, thirty inches in width, and eighteen inches in depth.

— Dr. Cyrus Edson, chief of the second sanitary division, having in charge the prevention of adulterations of food, has had a number of samples of mustard, obtained from various dealers, analyzed by Dr. Elwyn Waller, and the result shows that flour is not infrequently used to adulterate pure mustard, while in order to maintain the color of the article a sufficient quantity of what is known as naphtholine yellow is added. This substance is a highly irritant poison, which, when ignited, explodes with almost as much force as gunpowder, and cases against vendors of the adulterated mustard will be prepared by the counsel to the Board of Health.

—The Aqueduct Commissioners, including the Mayor, Controller, and Commissioner of Public Works, accompanied by the chief and consulting engineers, left the city on March 11th to visit Baltimore and Washington, and inspect the water systems of those cities. The last of February Commissioner Thompson, of the Department of Public Works, made his report of the work of the department up to December 31, 1883. In regard to the supplementary Bronx River system, upon which work had been commenced three years ago, he said that rapid progress had been made in carrying out the project, and that by the 1st of September it was expected that 5,000,000 gallons of water per day would be furnished through the conduit and distributed to the Twenty-third and Twenty-fourth Wards; while as the Kensico reservoir and the Rye Ponds became filled by the autumn rains, the supply would gradually be increased to about 10,000,000 gallons per day. In the report it was stated that until a new aqueduct was built, the efficiency of the water service depended entirely on further means and measures to prevent waste. From fifteen to twenty miles of pipes were added each year to the distributing system, and the consumption of water in the built-up portion of the city increased rapidly, in consequence of the erection of large business buildings and apartment-houses. During the last quarter the waste inspectors had made 15,308 house inspections and 9893 night inspections of house-drains, and reported 1770 cases of leaks from defective plumbing and 1614 places were water was wasted between midnight and 6 A. M. at the rate of from one to five gallons per minute.

Miscellany.

THE DISCOVERY OF THE GERM OF SWINE PLAGUE.

Dr. D. E. Salmon, of the Agricultural Department, Washington, published a communication in *Science* [February 8, 1884] upon the discovery of the germ of swine plague, criticising a statement made by Pasteur before the Paris Academy of Sciences last November. In this statement Pasteur, whilst claiming for Thuillier the credit of the discovery of this microbion of *rouget*, recognizes its simultaneous and independent discovery at Chicago by Dr. Detmers. Dr. Salmon claims to have anticipated both these observers by more than a year, and his comments are summed up in the following sentence: —

"It is a matter of record, therefore, that the organism which constitutes the cause of swine plague was first discovered by Klein in 1876, but that he failed to connect it in any way with the virus of the disease, and afterwards concluded that it depended upon a very different schizophyte. It is also a matter of record that I was the first to demonstrate by satisfactory methods that this micrococcus exists in the blood during the life of the animal, that it can be cultivated in flasks, and that the sixth successive cultivation, made in considerable quantities of liquid, and which contained no other form than micrococcus, still produced the disease. Neither Pasteur and Thuillier, nor any other investigators that I am aware of, have added one particle of evidence, except by way of confirmation, to that previ-

ously advanced by me. M. Pasteur is usually very particular in giving credit, but he does not seem to be keeping up with the progress of American science."

PETTIFOGGING BY THE DRUG ADULTERATORS.

THE *Daily Evening Traveller*, of this city, under date of March 17th, comments with well-merited severity upon an indecent circular which has been widely circulated in this vicinity of late in the interest of the manufacturers of adulterated drugs. The circular referred to is a collection of false statements and misrepresentations intended to influence legislative action in the direction of repealing the present statutory restrictions against adulterated drugs. The circular is signed with the name, says the *Traveller*, of "a well-known and influential gentleman who is acting as counsel of certain druggists who are urging some minor amendments of the law, but not its repeal. The name is printed in capital letters, and so placed as to appear to be his signature to the circular, which in point of fact was prepared and printed without his knowledge. This trick, intended to give to the statements of an anonymous circular the apparent authority of a respected and responsible ex-senator, is in complete keeping with the falsehoods and adroit misrepresentations which appear in every line. For example, the Dispensatory is a mere commentary upon the Pharmacopœia, and not the latter upon the former, as stated; and the drug referred to in that connection bore the label U. S. P., to indicate to the purchaser that it was prepared in accordance with the Pharmacopœia. The obnoxious bill and order referred to were not offered with the knowledge or wish of the Board, but are evidently a part of the previous scheme of the authors of the circular, who wish to rally to their aid the owners and venders of proprietary medicines and the opponents of the legal regulation of the practice of pharmacy. It is the opinion of the opponents of adulteration that the cunning attempt to work upon the fears of country druggists and grocers will undoubtedly cause considerable pressure to be brought to bear upon individual members of the Legislature, but that this effect is likely to be more than offset by the insight which the circular will give into the character and motives of the scoundrels who are trying to protect their dishonest gains by crippling the State Board in its vigorous and impartial enforcement of the laws."

HIGH AND LOW CEILINGS.

WE find in the February number of the *Practitioner* an article presenting the opposite views as to the most desirable height for rooms in the average grade of dwelling. On the one hand in a recent report to the Court of Common Council Dr. Sedgwick Saunders raised a protest against the erection, in Petticoat Square, of certain artisans' buildings for the reason that all the rooms above the ground floor are only eight feet in height. He shows by reference to a number of similar buildings that the general average height of rooms in modern blocks for working men is nine feet; that they vary from about ten feet on the ground floor to eight feet seven inches on the fifth and sixth stories; and he urges, on the ground of health, that every room occupied by the working classes should be at least nine feet, and preferably ten feet, in height On the other hand, Mr. John Honeyman recently read a paper before the Congress of the Sanitary Institute at Glasgow, in which he stated that there were distinct advantages in having low ceilings. Mr. Honeyman asserts that where land is dear and the demand for dwelling accommodation great, the builder will naturally be tempted to make stories low, and thus to increase their number, instead of constructing buildings of a few high stories; and that in this way an increased number of tenements can be provided at a reasonable cost, a method of procedure which of all others tends to the prevention of over-crowding. He further asserts that with the appliances which alone are available in the tenement of the working man it is far easier to ventilate a low room than a lofty one; that if a room be low in proportion to its area it will be better ventilated by the fire-place and doorway than if a space of stagnant air be provided at an elevation above the reach of such means of ventilation; and that high rooms mean a wasteful expenditure of money, with consequent increase of rent, which encourages in the most direct manner over-crowding with all its attendant evils. He also states that there is no necessary connection between density of population and a high death-rate, as the statistics compiled concerning the inmates of various improved dwellings show.

Provided a certain cubic capacity per occupant could always be insisted on, it would be better that it should include the comparatively large amount of floor area which would be necessary in the case of a room eight feet in height than that it should be partly contained in the higher strata of a room ten feet in height with a corresponding diminution of floor space. It will probably be found impossible, in the present state of public opinion, to require much more than 400 cubic feet for each adult, and half that amount for children under ten years of age, even in the case of a sleeping apartment which is not exclusively used for that purpose, and this minimum capacity must be regarded as utterly insufficient unless we have along with it a constant and rapid change of air. "But," to quote Mr. Honeyman, "to effect this change so that the whole volume shall be kept up to a safe standard of purity it is necessary that the fresh air should be properly distributed, and permeate the whole apartment. This point, we fear, is sometimes lost sight of. For example, if we take a room of 2000 cubic feet with five inmates, to keep the air, not as pure as we could wish, but in a tolerably healthy condition, at least 5000 cubic feet of fresh air would require to be passed through the room per hour, and as an ordinary open fire will easily attract that quantity there seems to be no great difficulty about it. But observe it is quite possible to pass all that quantity through the room without purifying the atmosphere in any appreciable degree; we may let it all in at one side of the room, and up the chimney at the other, leaving the air breathed by the inmates impure and poisonous, perhaps fatally, so that the more complete the distribution of fresh air the more beneficial will the ventilation be. Now the facility of distribution will depend to a large extent on the form of the room. If the room (always bearing in mind that we are speaking of rooms of the same cubic capacity) be high in proportion to its area, and the fresh air be admitted in the usual way referred to, the lower part only will be ventilated, and a large proportion of its atmosphere will remain impure;

whereas if it be low in proportion to its area it will all be well ventilated, and the inmates will get the full benefit of the room's capacity. In the other case they would not, as a considerable proportion of the high room would remain stagnant and foul, a condition objectionable on other grounds."

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 8, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Diarrhœal Diseases.	Scarlet Fever.
New York	1,340,114	624	225	15.36	18.56	4.96	1.76	2.08
Philadelphia	927,995	389	122	15.08	5.72	4.68	1.30	4.16
Brooklyn	644,526	220	84	18 90	15.30	7.65	1.35	5.40
Chicago	632,100	186	85	18.90	12.96	4.86	.54	4.86
Boston	423,800	197	57	11.22	19.38	3.06	2.51	1.02
Baltimore	408,520	175	68	19.38	11.40	3.42	.57	2.85
St. Louis	400,000	150	59	22.56	13.33	10.56	4.66	2.77
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	151	42	23.22	7.22	1.98	3.96	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	99	34	11.11	14.14	—	2.02	7.07
Pittsburg	180,000	82	42	19.52	30.59	7.32	7.32	1.22
Milwaukee	142,400	40	19	12.50	17.50	5.00	2.50	—
Providence	119,405	37	14	10.80	2 70	5.40	2.70	—
New Haven	62,882	30	—	3.33	26.66	—	—	—
Nashville	54,400	21	11	23.80	23.80	—	4.76	4.76
Charleston	52,286	37	12	2.70	10.80	—	2.70	—
Lowell	71,447	36	12	2.78	16.68	2.78	—	—
Worcester	69,442	27	9	14.80	25.90	11.10	—	—
Fall River	62,674	21	9	9.52	19.04	9.52	—	—
Cambridge	60,995	23	8	8.70	4.35	8.70	—	—
Lawrence	45,516	16	—	6.25	12.50	—	—	—
Lynn	44,895	12	4	8.33	16.66	—	—	—
Springfield	38,090	19	10	36.82	26 30	21.04	15.78	—
Somerville	31,350	11	4	27.27	9.09	18.18	9.09	—
Holyoke	30,515	10	3	20.00	40.00	—	10.00	—
New Bedford	30,144	14	2	7.14	21.42	—	—	—
Salem	29,503	13	—	7.69	—	—	7.69	—
Chelsea	24,347	5	0	20.00	40.00	—	—	—
Taunton	22,693	10	0	30.00	10.00	30.00	—	—
Gloucester	21,400	6	3	—	—	—	—	—
Haverhill	20,905	8	1	—	—	—	—	—
Newton	19,421	9	0	11.11	22.22	—	—	11.11
Brockton	18,323	4	0	75.00	—	—	—	50.00
Malden	15,273	3	0	—	—	—	—	—
Newburyport	13,947	5	0	—	20.00	—	—	—
Fitchburg	13,433	—	—	—	—	—	—	—
Sixty-seven Massachusetts towns	245,285	69	12	14.49	14.49	5.60	—	—

Deaths reported 2750 (no reports from Cincinnati and Buffalo): under five years of age, 951: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 425, consumption 419, lung diseases 397, diphtheria and croup 127, scarlet fever 72, diarrhœal diseases 57, malarial fevers 33, typhoid fever 27, measles 21, puerperal fever 21, erysipelas 19, cerebro-spinal meningitis 19, whooping-cough 17, small-pox 12. From *malarial fevers*, New Orleans 14, New York eight, Brooklyn three, Chicago, Baltimore, and St. Louis two each, Philadelphia and Nashville one each. From *typhoid fever*, Philadelphia nine, New York five, Baltimore four, Pittsburg two, Brooklyn, Chicago, St. Louis, District of Columbia, Milwaukee, Lynn, and Somerville one each. From *measles*, Baltimore 11, New York four, Brooklyn, Chicago, St. Louis, District of Columbia, Providence, and Nashville one each. From *puerperal fever*, Chicago and Boston five each, Brooklyn four, New York three, Philadelphia, Baltimore, St. Louis, and Nashville one each. From *erysipelas* New York six, Philadelphia five, Chicago three, St. Louis two, Milwaukee, Lawrence, and New Bedford one each. From *cerebro-spinal meningitis*, New York six, Chicago and Boston three each, Philadelphia two, Baltimore, New Orleans, Worcester, Chelsea, and Brockton one each From *whooping-cough*, New York nine, Baltimore three, Brooklyn, Chicago, Boston, New Orleans, and Pittsburg one each. From *small-pox*, New Orleans ten, Philadelphia and Nashville one each.

Five cases of small-pox were reported in St. Louis; scarlet fever 48, diphtheria 22, and typhoid fever nine in Boston; scarlet fever six and diphtheria three in Milwaukee.

In 87 cities and towns of Massachusetts, with an estimated population of 1,321,530 (estimated population of the State 1,955,104), the total death-rate for the week was 20.30 against 18.00 and 16.72 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending February 23d, the death-rate was 21.1. Deaths reported 3538: acute diseases of the respiratory organs (London) 345, whooping-cough 127, scarlet fever 99, measles 95, diarrhœal diseases 38, fever 34, diphtheria 29, small-pox (London four, Birmingham three, Sunderland two, Liverpool and Newcastle one each) 11. The death-rates ranged from 14.1 in Portsmouth to 28.1 in Manchester; Leicester 16.9; Bristol 17.2; Bradford 18.2; Birmingham 18.6; Sheffield 19.8; London 20.2; Birkenhead 20.7; Liverpool 23.9: Newcastle-on-Tyne 25.9; Leeds 26.8; Nottingham 26.9. In Edinburgh 23.1; Glasgow 25; Dublin 30.

For the week ending February 23d, in the Swiss towns, there were 29 deaths from lung diseases, consumption 23, diarrhœal diseases 19, diphtheria and croup 10, whooping-cough six, typhoid fever five, measles, scarlet fever, erysipelas, and puerperal fever each one. The death-rates were, at Geneva 23.4; Zurich 11.8; Basle 20.1; Berne 25.6.

The meteorological record for the week ending March 8th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 2	29.712	15	22	6	64	68	96	76	W	W	NE	4	7	4	F	C	C	—	—
Mon., 3	29.627	17	27	10	61	73	72	69	N	W	W	5	6	12	O	O	C	—	—
Tues., 4	30.113	13	22	8	66	56	75	66	W	NW	W	12	20	8	C	F	C	—	—
Wed., 5	30.240	21	30	6	76	77	96	83	SW	S	SE	6	10	12	F	O	S	—	—
Thurs., 6	30.096	31	41	22	90	65	76	77	NW	W	NW	12	8	6	S	O	C	—	—
Fri., 7	30.289	28	33	25	82	98	100	93	NE	N	N	9	10	12	O	S	R	—	—
Sat., 8	30.108	28	34	23	95	100	94	96	NE	NE	N	20	20	13	R	H	O	—	—
Mean, the Week.	30.026	22	30	14				80										59.50	.81

[1] O., cloudy; C., clear; F., fair; G., fog; H., sleet; S., snow; R., rain; T., threatening.

RESOLUTIONS OF THE BERKSHIRE DISTRICT MEDICAL SOCIETY ON THE DEATH OF DR. ALMON N. ALLEN AND DR. H. L. SABIN.

AT the regular monthly meeting of the Berkshire District Medical Society the following resolutions were adopted: —

Whereas, Our brother, Almon N. Allen, of Pittsfield, has been removed from the scene of his long and useful labors on earth, and, as we trust, to a happy and everlasting home in the life which succeeds this; therefore —

Resolved, That while we bear our willing testimony to his character as a man and a physician, and deplore his absence from this our monthly meeting of the Society, we tender to his wife, son, and other relatives the sincere expression of our condolence and sympathy in their affliction, and commend them to the love of that Being "who doeth all things well."

Resolved, That a copy of these resolutions be forwarded to the family of our deceased brother, *The Boston Medical and Surgical Journal*, and the same be sent to the Berkshire County *Eagle*, and Pittsfield *Sun* for publication.

Resolved, That a copy be placed on the records of this Society.

A. M. SMITH,
F. K. PADDOCK, } Committee.
O. S. ROBERTS,

Whereas, Our beloved brother, Dr. H. L. Sabin, of blessed memory, has been removed from our association,

Resolved, That we cherish with lively gratitude his long and happy union with us; we shall ever remember and be stimulated by his devotion to and love for his profession; his uniform kindness and courtesy; his eminent ability; his scrupulous adherence to high professional integrity; his hatred of shams; his just appreciation of noble purpose and endeavor; his manly eloquence in the cause he considered pure and just, and his Christian firmness and gentleness.

Resolved, That while we cannot mourn for the happy termination of such a long, useful, and noble life, yet we tender to his family our sincere sympathy in this bereavement.

Resolved, That these resolutions be sent to the family by the Secretary, spread upon the records of this Society, and published in *The Boston Medical and Surgical Journal*.

T. K. DEWOLF,
C. L. HUBBELL,
N. S. BABBITT, } Committee on the above Resolutions.
A. M. SMITH,

H. COLT, JR., *Secretary Berkshire District Medical Society.*

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MARCH 8, 1884, TO MARCH 14, 1884.

BILLINGS, JOHN S., major and surgeon. Granted leave of absence for one month, with permission to go beyond sea, to take effect April 1, 1884. Paragraph 6, S. O. 61, A. G. O., March 13, 1884.

HEIZMANN, CHARLES L., captain and assistant surgeon. Leave of absence extended three months. Paragraph 9, S. O. 57, A. G. O., March 8, 1884.

WALES, PHILIP G. Appointed to be assistant surgeon, with the rank of first lieutenant, to date from February 7, 1884, vice Brewster, resigned. Mem. A. G. O., March 10, 1884.

FISHER, WALTER W. R., and POLHEIMER, ADRIAN S., first lieutenants and assistant surgeons, assigned to duty in Department of California.

STEPHENSON, WILLIAM, BORDEN, WILLIAM C., and CHAPIN, ALONZO R., first lieutenants and assistant surgeons. Assigned to duty in Department of the Platte.

ROBERTSON, REUBEN L., and EDIE, GUY L., first lieutenants and assistant surgeons. Assigned to duty in Department of Texas.

CROSBY, WILLIAM D., first lieutenant and assistant surgeon. Assigned to duty in Department of Arizona.

GANDY, CHARLES M., first lieutenant and assistant surgeon. Assigned to duty in Department of East.

PILCHER, JAMES E., first lieutenant and assistant surgeon. Assigned to duty in Department of Dakota. Paragraph 4, S. O. 55, A. G. O., March 6, 1884.

KNEEDLER, WILLIAM L, first lieutenant and assistant surgeon. Assigned to temporary duty at Fort A. Lincoln, D. T. Paragraph 3, S. O. 26, headquarters Department of Dakota, March 8, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE TWO WEEKS ENDING MARCH 15, 1884.

AMES, H. E., passed assistant surgeon, from the Colorado and ordered to the Greely relief steamer Bear.

TERRILL, F. H., passed assistant surgeon, to coast survey steamer Hassler.

MCCARTHY, R. H., passed assistant surgeon, from the coast survey steamer Hassler and wait orders.

DEATH, — Died, at Longmeadow, Mass., March 14, 1884, George Hooker, M. D., M. M. S. S.

APPOINTMENT. — Everett Torrey, Esq., has been appointed a member of the Massachusetts Board of Health, Lunacy, and Charity, in place of Hon. Thomas Talbot, retired.

BOOKS AND PAMPHLETS RECEIVED. — The Veins of the Brain and its Envelopes. Their Anatomy and Bearing on the Intra-Cranial Circulation. By William Browning, M. D., Brooklyn, N. Y. Brooklyn, N. Y.: F. B. O'Connor, Jr., 68 and 70 Court Street. 1884.

Minutes of a Convention held in the City of Albany, February 4 and 6, 1884, at which the New York State Medical Association was Organized on a Permanent Basis.

Report of the Secretary of the State Board of Health of West Virginia for the Years ending December 31, 1881, 1882, and 1883. Wheeling. 1884.

Fifteenth Annual Report of the Trustees of the Willard Asylum for the Insane to the Legislature. For the Year 1883. Albany. 1884.

Original Articles.

PREVESICAL CELLULITIS FOLLOWING HERNIOTOMY. PHLEGMONOUS ABSCESS, "SOUS-OMBILICALE," IN HEURTAUX SPACE.[1] PERINEPHRITIC ABSCESS.[2]

THREE CASES REPORTED BY WILLIAM INGALLS, M. D. (HARV.)

CASE I. PREVESICAL CELLULITIS, FOLLOWING AN OPERATION FOR STRANGULATED HERNIA.

P. H., Irish laborer, age twenty-two years, single, was admitted to the Boston City Hospital on the 28th of April, 1883, having right inguinal hernia which occurred five years previously, after a fall from a height, and which has troubled him ever since, but which he has always been able to "put up" on its coming down until the 24th, when it came down, and his usual efforts to reduce it were ineffectual. During these last four days the patient has suffered great pain in the abdomen and some nausea, but no vomiting until yesterday when he took some medicine. After reduction by incision, sutures, drainage tube, Lister dressing. There was restlessness in the night, but neither vomiting nor chill; some pain and tympanites also, which were modified by morphia; on the 30th there was increased tympanites.

May 1st. Abdominal tenderness less.

May 7th. The wound is granulating; there is complaint of pain in hypogastrium and difficult micturition; and up to the 15th there continued to be abdominal pains and tenderness; diarrhœa; also a development of induration, pre- and supra-pubic, the area of which was a little more extensive on the right side than on the left; it was circumscribed. These symptoms led to an examination by the rectum, and there was found to be considerable tumefaction and induration in the prostatic region, recognition of the prostate gland being obscure. Analysis of the urine: specific gravity 1027; color normal; reaction acid; albumen one per cent. The wound is doing well.

May 15th. At this date the diagnosis was "a forming prevesical abscess."

From this date the tumefaction by degrees subsided, the wound healed rapidly, all the symptoms disappeared, and the patient was discharged, well, on the 11th of June, forty-eight days after the strangulation. There was at no time fluctuation of the prevesical tumor, nor was there any discharge therefrom.

CASE II. PHLEGMONOUS ABSCESS OF ABDOMINAL WALL.

D. L., 'longshoreman, age thirty-nine, Englishman, on the 11th May last was presented on the operating table for examination, not having previously been seen by myself. The history of the case is that up to about two weeks ago he had been generally in good health; that about that time he noticed a small bunch a little below the umbilicus which began to grow, with increasing pain on pressure and also upon coughing. Micturition became difficult and painful, and "there was a sensation as of a weight pressing upon the bladder."

Inspection discovered a tumor of the form of a demi-ellipse, the base of which was a horizontal line drawn across the umbilicus, the apex below, the diameters fully four inches, and the prominence, perhaps, an inch higher than the normal surface, red and fluctuating. Without ether the abscess was incised, and a large amount of pus poured forth, a number of clots of broken-down tissue being mingled therewith. The man was discharged in good condition with the wound closed on the 3d July, fifty-four days from operation, sixty-eight days from first notice of pain.

CASE III. PERINEPHRITIC ABSCESS.

A. C. S., age twenty-seven, Bostonian, workman in a shoe factory, entered hospital May 10, 1883, and reports that ten days ago he had pain in left abdomen, and he indicated a spot an inch below the point of the lowest rib at which a swelling or fullness was simultaneously felt, and which increased, as also did the pain.

Examination proved the existence of a circumscribed swelling at the region indicated, fluctuating and painful on pressure. This was incised and a large amount of pus escaped. Drainage tube and usual dressing.

June 5th. Twenty-six days from the above-mentioned opening, which has healed. The case has been going on well for the most part, but there has been some complaint of pain in left lumbar region, and there is now some pain shooting down the side and lower limb; the complexion is pale, and there is an anxious expression of face.

June 8th. A fullness over left kidney in process of formation during these past three days induced a suspicion of a forming abscess, and was to-day found to have ripened into one, and from this, upon its being opened, there flowed a large quantity of pus.

On the 11th of July, health and strength being much improved by suitable tonics and moderate exercise out of doors, he was discharged, well.

The position of the first abscess was front of, and precisely opposite to, the junction of the lower and middle third of the kidney, perhaps a little lower, and it is an afterthought that it was a perinephritic abscess, for it seems to be an unusual site for the pointing of one.

In a majority of cases pain in the side and pain shooting down the lower limb are complained of during the formation of the abscess; these symptoms were not alluded to by the patient until the forming of the second abscess. Although the kidney is not diseased in all cases of perinephritic abscess, yet the urine in all cases should be examined; it was not examined in this case, and the omission is inexcusable.

In the *Annals of Anatomy and Surgery* for December, 1882, there is an article by Dr. Pilcher entitled Prevesical Phlegmons.

He says: "The slight attention which has been paid to the study of phlegmons and abscesses, especially when considered from a topographical point of view, is very notable; . . . among the 182 monographs enumerated by title upon the subject of abscesses, including phlegmons and cellulitis, 102 are French, fifty Latin, nine English, two American, and nineteen from other nationalities."

Dr. Pilcher's paper is full, and, as the reader thinks, admirable as to the regional anatomy and the position and the causes of the subject in hand; as all may read, it is not expedient to be too free with extracts; but his "Conclusion" may be permissible, as follows:—

"Submuscular phlegmons are the result of bloody effusions upon the posterior face of the recti muscles,

[1] Bulletins et Memoires de la Société de Chirurgie de Paris, tome iii., page 611. Phlegmon sous-ombilical, par le Dr. A. Heurtaux.

[2] Read before the Surgical Section of the Suffolk District Medical Society, January 2, 1884.

and the prevesical phlegmons are the consequence of an affection of some of the organs contained in the true pelvis. Submuscular phlegmons develop from the pubes towards the umbilicus . . . and have no prolongation into the true pelvis.

"The prevesical phlegmons form tumors which, situated in the true pelvis, and consequently accessible to rectal touch, rise more or less above the pubes, between it and the bladder, and may extend towards the rectum and the iliac fossa. . . . Resolution is rare."

It seems to the writer that he is justified in believing that the first case was a cellulitis beginning in the cavity — properly, *space* — of Retzius, for, first, there was "an affection of some of the organs contained in the true pelvis," namely, the yet unhealed herniotomy; second, the swelled and hard prostatic region; third, the formation of a hard plate which formed in front of and above the pubes; suppurative action did not take place, else there would have been a typical prevesical abscess instead of, or a result of, the cellulitis.

The second case is a submuscular phlegmon such as is described and delineated by Castaneda y Campos,[1] as "Le phlegmon sous-ombilicale," and these do not invade the precincts of the true pelvis.

It may be said at this point that there is, apparently, good reason why results of study of this subject *as regional disease* have not been published in this country; for having searched the records of the Boston City Hospital from 1870 to the present time no record of anything of the kind was found; moreover, the records of the Massachusetts General Hospital for the years 1877, 1878, 1879 were thoroughly searched, and but one case bearing upon the subject was found. Therefore, it may be presumed, justly, that cases of the kind under consideration are rare, at all events, in this part of the country.

When the case of sub-umbilical abscess was uncovered for examination, Dr. Fifield being present immediately recognized it as a disease described by several French authors, and in connection with it called attention to the fact that this and prevesical abscesses were in near relationship for purposes of anatomical consideration.

A CASE OF CYSTO-PYELITIS OR PYELO-CYSTITIS OR CYSTITIS COINCIDENT WITH PYELITIS.[2]

BY EDWARD O. OTIS, M. D.

I FIND myself in the rather anomalous position of presenting a case of which I seem to have about as many suppositions as to its exact diagnosis as existed with regard to the mental condition of Hamlet. Still the case has seemed to me one so suggestive in so many of its aspects and so shrouded in doubt as to its exact nature and origin that I have ventured to report it. It extended from May, 1881, to June, 1883.

H. R., a midshipman, twenty-two years of age, of phthisical parents, enjoyed robust health while at the naval academy, and for two years after while on a cruise to the West Indies and northward. He sustained successfully all the physical examinations required from time to time while at the naval academy and in the service. In the latter part of May, 1881, some months after the expiration of his cruise, he went to Annapolis to pass his examinations for promotion. He studied hard and late, and while there played a game of base ball in which, after being heated, he sat down on the ground, but with no apparent evil result. I believe he was also hit by a ball in the bladder or genital region somewhere, but of this I cannot be sure; if he was it was not severe enough to make any lasting impression upon him, so that I do not think he mentioned the fact to me. The medical officers under whose care he subsequently came also had the impression that he received such a blow, but I find no mention of it in their records. A short time after this game he began to feel a slight trouble in the bladder region while walking and while urinating. This continued five weeks before any physician was consulted, and all this time he was about, the last act before taking to his bed being to walk six or seven miles. The pain increasing he consulted an eminent surgeon, who said he had all the symptoms of stone, and sounded for it at two different times with negative results. He was given a prescription for cystitis composed of pareira brava, liq. potass., etc. The pain referred to the perinæum and head of the penis increased so that he took to his bed. He was visited once at his house by the same surgeon, who washed out the bladder, and also made an examination of the urine, the result of which I obtained through his kindness, and which was as follows: Reaction acid; specific gravity 1020; albumen, one eighth of one per cent.; large amount of pus and mucus; bladder epithelium; a few blood corpuscles.

I saw him for the first time September 14, 1881. He was passing his water about every two hours, and complained of pain, which he located two or three inches from the head of the penis. There was no tenderness over the region of the bladder or in the lumbar region. No tenderness or enlargement of the prostate. He was obliged to keep the dorsal decubitus now, as all through his illness, on account of the pain when he attempted to lie on his side. The other organs were healthy with the exception of a mitral systolic souffle. My examination of the urine was practically the same as the one previously made. I did not take the temperature at that time, but three or four days later it was 102.8° F., and continued to vacillate from this time on between normal and 104° F. My treatment was essentially that instituted by his previous physician; the prescription above referred to was continued, also decoction of triticum repens and a weak alkali, and the bladder was washed out gently sometimes with simple warm water, sometimes an astringent or antiseptic was added to the water. Other symptoms, digestive derangements, fever, pain, etc., were treated according to the indications. September 19th he complained of *pain in* the *right loin*, and the following day pain just below the cardiac region. September 21st the pain in the right loin had *disappeared*. November 8th the note is made that he complained of soreness and pain in the *right iliac* region. From the time I first saw the case until November 14th, when he entered the Naval Hospital at Chelsea, the course of the disease was one of great variations, — now a chill and high fever and profuse perspiration, with gastric disturbance, pain, and much depression; now absence of all fever and pain, fair appetite, and general well being. The urine also varied much as to its abnormal ingredients, and as to the intervals between passing it.

[1] Du phlegmon, etc., page 88.

[2] Read before the Surgical Section of the Suffolk District Medical Society, January 2, 1884.

At one time he passed several clots, and there was much blood. The last examination which I made, November 7th, was as follows: specific gravity 1016; reaction neutral or slightly acid; albumen, from one half to one per cent.; abundance of pus; few blood corpuscles; amorphous matter.

From November 14, 1881, to June 19, 1883, when he died, he remained at the Chelsea Naval Hospital, and for the record of his case while there and an account of the autopsy I am indebted to the surgeons on duty there during this period, and especially to Dr. A. C. Gorgas, Medical Inspector United States Navy. During this time the disease progressed steadily, but with short intervals of remission, when all the general symptoms would be much improved, with diminution of pus in the urine. There was usually rise of temperature in the afternoon, and almost continual pain, so that finally he became an opium eater in consequence, with all the train of symptoms such as is consequent upon a chronic suppurating disease. The bowels were generally obstinately constipated, and evacuated with much pain and depression. The urine, I believe, was always acid, often so strongly that an alkali had to be exhibited. At no time could he lie on either side. There was pain at times in the right lumbar region, but not constant, neither was there any marked tumor there. A very noticeable and significant symptom was the extreme constipation and flatulence, caused, undoubtedly, by adhesions about the intestines, preventing peristalsis and permitting gaseous collections. The remedies tried were innumerable, none of which apparently exercised any influence over the course of the disease, copaiba, sandal-wood oil, iron, alkalies, diuretics and astringents of different kinds, sedatives and tonics. The bladder was also washed out with various medicated waters containing antiseptics and astringents. In order to represent the progress of the disease more vividly I will give extracts from the record of the case after he left my care: —

November 17, 1881. Patient cannot stand or walk without much pain, or lie on either side.

December 22d. Urine examined: acid; large amount of sediment, pus and mucus corpuscles, occasionally a blood globule. Pain and tenderness over membranous and prostatic portions of urethra. No particular sensitiveness over either kidney nor in hypogastrium. Temperature in morning normal, in evening 101° F. to 102° F.

December 30th. Movement of bowels always causes pain.

January 14, 1882. Retains urine from six to eight hours. Freedom from pain. Ability to move about. Much less amount of pus and mucus. [Taking opium daily.]

February 20th. Seat of pain at membranous and prostatic portion of urethra and neck of bladder. Urine much increased. Pus less than a month ago.

May 14th. Decided and well-marked tenderness over parts corresponding to *left kidney*, and pain starting from that point and following course of ureter to bladder and penis.

May 15th. Pain over left kidney relieved. Urine and pus tinged with blood. No casts or renal epithelium. Reaction acid. Occasional night sweats.

May 16th. More blood in the urine; color that of port wine. Crystals of oxalate of lime.

May 17th. Passage of bowels with much pain and vesical tenesmus. Much blood in the urine. No pain over kidney, as before.

May 18th. Violent paroxysm of tenesmus and pain starting from neck of bladder and running to end of penis.

June 12th. A sound was passed, but the range of motion found very limited.

June 25th. Condition essentially the same. Neuralgic pains about bladder, penis, and perinæum. Occasional small blood clots. Urine tinged with blood, which has a fresh appearance, as if from bladder wall. Appetite poor.

August 1st. In *right* lumbar region of abdomen a circumscribed hardness is perceptible on percussion and palpation; not very sensitive, but rather sharp pressure producing a painful sensation, referred to deeper parts not distinctly located by patient. The nature or origin of this tumor cannot distinctly be made out, but it lies nearly over the situation of the right kidney. Examination of side and back in same region discovers no marked tenderness nor any tumor.

September 20th. Decided decrease in amount of pus within the last month, and a nearly corresponding decrease of pain.

October 8th. It seems probable that there may be a filling up and temporary emptying of some cavity of pus, whether or not in the kidney. The temperature rises as pus diminishes and falls with its reappearance.

November 13th. Passed several small concretions with a large quantity of pus.

December 7th. Felt a tumor in the right side, which gave much the sense of the liver but that it seemed in a degree globular and gradually sank.

December 14th. Acute pain along the urethra. Urine very pale, but highly acid; deposited about one fifth volume of pus and very great percentage of mucus. Pain so severe took 0.50 gramme of opium and 0.032 grammes of morphine, besides nine grammes bromide potash.

December 17th. Every attempt at micturition accompanied by more or less acute pain and frequent stoppage.

December 22d. Appetite remarkably good.

December 29th. Urine very mildly acid from continued doses of bicarbonate of soda.

January 3, 1883. Inflation of the intestines by gas remains the most embarrassing condition.

January 8th. Right testicle and cord sensitive.

January 16th. Catheter introduced, but produced such pain it had to be withdrawn.

February 5th. Pus less; general condition improved; urinary fluid more natural in color.

February 9th. No nephritic symptoms observed for some time, all pain being confined to urethral, perineal, and supra-pubic parts. Frequently the urine is voided without the least discomfort.

February 16th. Acute cystitis reappeared, with considerable strangury and increase in purulent sediment. [Deprived for the most part of his opium.]

February 21st. Complains of want of relief produced by evacuation of the bowels, a condition due to pressure upon the rectal walls by the thickened and weighty bladder.

March 9th. Diarrhœa and profuse sweating.

March 19th. Attempt made to explore bladder; passage of instrument interrupted at prostatic portion. Upon introduction of finger in rectum the tissues between it and rectum were found to be reduced to such tenuity that neither the use of the least pressure or a smaller instrument than No. 6 was deemed advisable.

March 29th. About 900 cubic centimetres of urine passed daily.

April 14th. Urine contains increased amount of pus.

April 28th. Hacking cough.

May 15th. Dull pain in left chest.

May 22d. Abundant râles heard over left lung. Painful inspiration. Glands of left axilla are enlarged and tender. Pain about articulation of jaws. Increasing emaciation. Urine more abundant. Less pus.

May 27th. But little respiration heard over left lung.

June 16th. Acute pain in right lumbar region, which quickly spread over the abdomen, with marked tenderness. Great distress and prostration. Symptoms of peritonitis. Concentrated urine. Retraction of penis and testes.

June 18th. Frequent vomiting of dark watery fluid, which is apparently altered exudation into the stomach, and independent of ingesta. Respiration oppressed. Circulation more feeble.

June 19th. Dissolution.

Autopsy. Eleven hours after death. Body extremely emaciated. Rigor mortis developed and subsided rapidly; entirely disappeared at time of examination. Brain not examined.

Thorax. Costal pleuræ adherent to chest walls by numerous and strong bands; also to pericardium on left and diaphragm on right side. Inferior portion of upper left lobe of lung consolidated, section sinking in water. Apex congested, bound by adhesions, and the seat of several small vomicæ and cysts of cheesy matter. Upper lobe of right lung also congested, and contained several superficial hard masses, sacs filled with cheesy substance. General pulmonary tissue very pale, but crepitant. Thoracic cavity sensibly encroached upon by abdominal organs. Pericardium contained small quantity of fluid. Heart rather small. Right side filled with clotted blood; and after dividing the aorta a fibrinous clot was withdrawn about twelve inches long, bifurcated, and corresponding with arterial divisions. Similar clots were found in left side. Semilunar valves normal. Mitral found to be insufficient.

Abdomen. A large quantity of sero-purulent fluid in peritoneal cavity, the pus apparently yielded by an abscess resting on the right side of the vertebral column and under lower extremity of kidney, and which was cut into before its discovery. Extensive adhesions between lower abdominal wall and diaphragm. Intestines united with each other, with posterior abdominal wall and omentum by numerous adhesive bands. Omentum studded with adhesive deposit. Stomach contained dark fluid, similar to that vomited, and distended by gas. Intestines congested, and generally attenuated, cæcum containing hard fæcal masses. Descending colon bound down to posterior wall of abdomen, and contracted to one fifth or one sixth its normal calibre throughout its extent; also the rectum. Left kidney normal. The right enormously distended by pus, after evacuation of which it measured six and one half inches in length and four and one half in width, and its medullary structure was found completely destroyed by suppuration, a distinct abscess occupying each pyramidal section. The intervening cellular tissue was thickened into dense septa, and the capsule was greatly hypertrophied. Right ureter occluded. Bladder empty, shrunken, walls thickened, but showing no evidence of recent inflammatory action.

The points of interest in the case seemed to me to be the following: —

I. The insufficient cause. There was no vesical or renal calculus or any injury or exposure which would seem sufficient to give rise to such severe trouble, especially in a young man perfectly strong and robust up to the time of his illness. (I could never find any evidence of venereal trouble.)

II. The origin of the disease. Was it in the bladder or in the pelvis of the right kidney? If a primary pyelitis, why then did we not have pain more constant and confined to the diseased kidney? The first notice of pain in either kidney region was two or three months after the beginning of the disease, and this disappeared in a day or two. The next record of any pain is some six months afterwards, and that in the left kidney. Then, again, a number of months later pain is noticed in the right kidney with some evidence of a tumor. It will be also noticed that the urine was always acid, and often strongly so. The grave constitutional disturbance from the beginning would favor a primary pyelitis, or a very rapid invasion of the kidney if cystitis was the primary affection. Moreover, if cystitis was the original disease why were not both kidneys invaded? I must confess my inability to locate the origin of the disease as well as to ascribe it to any sufficient cause. I would suggest tuberculosis as possible. That there was a pyelo-nephritis in the later part of the disease, with symptoms of pyæmia, there can be hardly any doubt.

We have three suppositions as to its origin: First, it was a case of cystitis from unknown cause, with subsequent extension of the disease to the right kidney. Second, we have a primary pyelitis, also of unknown cause, with later inflammation of the bladder. Or third, we have pyelitis with coincident inflammation of the bladder.

III. As to treatment. Would any surgical interference have been justifiable or advisable? Two operations it seems to me are to be thought of: —

First, one referred to the right kidney. An exploratory incision, or at least an exploratory puncture, with an aspirating needle. But were there indications enough to warrant this? It was not until more than a year after the beginning of the disease that the evidence was sufficient to make it pretty certain that there was suppuration going on in the right kidney, with the formation of an abscess. On August 1, 1882, a circumscribed hardness in the right lumbar region was detected, and later, in December 7th, the note was made that a tumor was felt in the right side, but apparently it could not be very definitely made out. With this evidence and at this advanced stage of the disease would an operation such as I have suggested have been justifiable?

Second. From the symptoms of stone which were present, and also from the doubt as to the origin of the disease, there being at least an equal chance that the bladder was primarily affected, should, in the early days of the disease, an exploratory perineal incision, as suggested by Sir Henry Thompson recently, have been advised? Sir Henry Thompson claims that the operation is simple and easy, and that it is the most valuable aid to diagnosis in cases of obscure bladder trouble; and moreover declares that digital exploration of the bladder can be performed without much risk to

the patient. Further, if the case on perineal section had seemed to be one of pure cystitis, then the section could have been utilized as a remedial measure, as suggested by Dr. Weir, of New York, in the *Medical Record* for June 12, 1880, page 659, by giving free and easy drainage to the organ, and a better and more perfect channel for irrigation.

IV. The difficulty of determining from whence the purulent discharge proceeded. I believe that it is not certain that the epithelial cells of the pelvis of the kidney are characteristic, and if they are, they are not always present or detected. Moreover, the urine is not always alkaline in a chronic case of cystitis of a high grade.

A CASE OF FACE PRESENTATION WITH SOME REMARKS ON THE TREATMENT OF THIS CLASS OF CASES.[1]

BY J. B. SWIFT, M. D.

AT a meeting of this Section last year Dr. Harlow reported a series of twelve cases of face presentation, and showed that the labor might be easier for the mother and safer for the child by an early rectification of the position.

I have recently had a case which I succeeded in converting from face into a vertex, and which I think may be of interest in exciting a discussion as to the proper treatment of these cases.

On the morning of September 9, 1883, about nine o'clock, I was called to attend Mrs. O'D., and on my arrival found her in labor with her fifth child. She says her previous labors have always been tedious and slow, and from the last she was a long time in getting up. She has been married seven years, and is of a decidedly nervous temperament.

Her pains began about two A. M., and although not very severe nor frequent she has had no sleep since they began. Examination per vaginam showed the cervix entirely obliterated, the os open so as to admit the finger, the membranes intact, head presenting, and the anterior fontanelle directly over the os. The head was movable above the brim and could be easily turned over so as to make O. R. P., but it would not remain so. The patient was dressed and about the room, and had eaten her breakfast as usual.

At eleven A. M. there had been no change, and she had had no pains since the first examination. She was advised to lie down and try to get some sleep, taking, if necessary, one drachm of bromidia, which had been prescribed by her regular attendant, and found to act well at times when she suffered from insomnia.

At two P. M. I found that she had slept somewhat without the aid of the medicine, and that the pains had returned, the os being somewhat more dilated than at the previous examination. The head remained in the same position.

At three o'clock I found the os about three quarters dilated and the pains changing in character, becoming expulsive. The head had become more extended, the orbit now occupying a position in the centre of the superior strait. The head was still movable, but pressure on the forehead would now only turn the head so as to bring the anterior fontanelle into its original position. I intended to wait until the os was more fully dilated and then introducing the hand rupture the membranes and bring down the occiput, hoping that with the escape of the waters the head would remain flexed. Unfortunately with the next pain the membranes ruptured spontaneously, and I found the head fully extended, the nose being in the centre of the strait. Pressure on the chin would still convert it into a brow, but the head would turn no farther. I informed the husband of the condition of affairs, and explained to him that I intended to give the woman ether and try to rectify the position. He asked that Dr. F. Minot, who had seen her in one or two of her previous confinements be called in consultation. On his arrival I told him what I proposed doing, and he agreed to the proposition.

The patient was etherized, and introducing my left hand I grasped the occiput, drawing it down into the pelvic cavity and placing it in the right anterior position.

It was deemed advisable to finish the delivery then, rather than leave it to the natural efforts, so the forceps were applied and a female child was extracted. After the delivery of the placenta there was some hæmorrhage, which was controlled by a hot water douche. The woman made an easy and rapid convalescence, the temperature never going above 99° F.

We are told in our obstetric books that the older accoucheurs believed spontaneous delivery by the face to be impossible, and that they always terminated such cases by version. Playfair says: "Smellie first recognized the fact that spontaneous delivery is possible, and that the chin turns forward and under the pubes; but it was not until long after his time, and chiefly after the appearance of Mme. Lachapelle's essay on the subject, that the fact that most cases could be naturally delivered was fully admitted and acted upon."

Such being the case, version was given up and the cases were left to the natural efforts; but it was soon found that these cases were long and tedious, and the prognosis for both mother and child was more unfavorable than in cases where the vertex presented; thus Cazeaux says: "We must remark that, as a general rule, the labor is more tedious, more painful, and more dangerous, both to the mother and child, and that it much oftener demands the intervention of art." According to Winckel the mortality of the children amounted to thirteen per cent., while that of the mothers reached as high as six per cent. Playfair says: "As regards the mother, in the great majority of cases the prognosis is favorable, although the labor is apt to be prolonged, and she is therefore more exposed to the dangers attending tedious delivery. As regards the child, the prognosis is much more unfavorable than in vertex presentations. Even when the anterior rotation of the chin takes place in the natural way it is estimated that one out of ten children is still-born; while if not, the death of the child may almost certainly be expected."

Schroeder says: "The prognosis in face presentations, even with the usual mechanism, is far more unfavorable than in head presentation. While in the latter nearly five per cent. of the children are still-born, that proportion rises to thirteen per cent. in face presentations. For the mother, also, face presentations are more unfavorable than head presentations, because on an average the labor lasts much longer. Of course, the

[1] Read before the Section for Obstetrics and Gynæcology of the Suffolk District Medical Society, November 21, 1883.

prognosis is still more unfavorable if the mechanism is abnormal, that is, when the chin does not take its forward turn. Then scarcely a child will be born alive." And finally Lusk: "Though spontaneous delivery is the rule in face presentations, the dangers to both mother and child are considerably greater than in vertex presentations."

In spite of this unfavorable prognosis we are told to leave these cases to nature, only interfering when it becomes evident that the child cannot be born while in this position. Then, if the head is still movable at the brim, or can be pushed up, there are two methods to be applied: (1) pressure on the chin in such a direction as to cause the head to revolve on its transverse axis; or (2), drawing down the occiput by the hand or vectis introduced into the uterus. These measures failing, or if the head is so firmly fixed in the cavity that it cannot be pushed back, the forceps must be used.

Schatz has proposed a method, by external manipulation, which is to be employed early in the labor. I have not seen the original article, but Lusk speaks of it, though he does not say with what success its employment has been attended. The operation consists in restoring the child to the normal attitude by pressing on the chest in one direction, while with the other hand the breech is pressed in the contrary direction, this having the effect of raising the head and at the same time doubling the child up, when the head will resume its normal position, and the vertex will present. There can be no question that, if this can be done, it should be tried in all cases where the diagnosis is made early, and I regret that it was not attempted in the case which has been reported, but had it been attempted I think it somewhat doubtful whether it would have been successful, for, although when the extension of the head was first discovered it could be corrected by pressure on the forehead, it would not remain so when the pressure was removed. So in any case, although we might be able by this method to remedy the malposition, still the causes which acted originally in making the face present probably would remain, and there is no certainty that the head would stay in its proper position if put there.

The question then arises whether or not in such cases we are justified in going still farther. It seems to me that we are, especially when we take into consideration the unfavorable prognosis to both mother and child, and the fact that it is much easier to rectify all malpositions early than when labor has been going on for some time. Still I would not lay this down as an absolute rule to be followed in all cases, but my plan of treatment would be in all cases to attempt to rectify the position by Schatz's method. If successful, well and good; but if the malposition returns after being rectified, or not being successful in our attempts at rectification, watch the dilatation of the os closely, care being taken not to rupture the membranes; and when the os is sufficiently dilated correct the position by pressure on the forehead, rupture the membranes, and keep up the pressure until the pains have caused the vertex to engage in the brim, when the case, if otherwise all right, can be left to nature. Or if on our first examination we find the membranes ruptured and the head still above the brim, try to correct it by pressure in the manner already described, or, not being able to do this, introduce the hand, grasp the occiput, and bring it down. There are cases, no doubt, in which the pelvis is roomy or the head small, where the face will engage easily and come through the pelvis without much more effort than in a great many vertex cases, but I think it will be found in the large majority of face cases that this is not the rule. The dimensions of the presenting part cannot be reduced in the way they are when the vertex presents, for the bones of the face are united, and will not overlap as the parietals will, therefore a greater exertion is required to force the face through, thus causing a tedious and harder labor, with the risk of tiring out the patient. Another thing to be thought of is the appearance which the child presents after being born in this way. The swelling known as the caput succedaneum of course forms on the face, and Playfair says of this: "Even when the child is born alive the face is almost always greatly swollen and disfigured. In some cases the deformity produced in this way is excessive, and the features are often scarcely recognizable." In spite of our assurance that this disfiguration will all pass away in a few days it must produce rather an unpleasant sensation, to say the least, to present such a child to a woman who has just passed through such an amount of suffering. Probably no one would object to the employment of Schatz's method.

In speaking of the other methods Lusk says: "Though occasionally successful they have been discountenanced by most obstetric writers, because experience has shown the results to be by no means commensurate with the dangers incurred." But he does not tell us what these dangers are. Further along, however, in speaking of the treatment necessary for cases which have been left to nature, and where she has failed, he shows how much more the danger is increased to the woman, and the child is almost always dead.

Playfair argues against interference on the ground that most men are not skillful enough, and then goes on to say in the next sentence: "When once the face has descended into the pelvis difficulties may arise from two chief causes, — uterine inertia, or non-rotation forwards of the chin." After speaking of the treatment for inertia he continues: "The second class are much more important, and may try the resources of the accoucheur to the utmost." It seems to me that it requires much more skill to handle a case where rotation fails than to merely turn the head over while it is still movable above the brim.

Cazeaux, speaking of the treatment of face cases, says: "In the present state of our science the mento-anterior positions should be left to nature, yet does the same rule hold good with regard to posterior ones? In a word, if this last position be clearly recognized before or shortly after the membranes are ruptured, should we not, prior to the engagement of the face, and while the head is still movable, endeavor to convert it into a vertex position, and thus prevent the difficulties that might subsequently arise? If I had to decide under such circumstances I would certainly resolve the question in the affirmative." Has our science advanced sufficiently since his time to warrant us in our undertaking? It seems to me that it has. The great objection in my mind to interfering with cases where the chin is anterior would be that they would be converted into cases with the occiput posterior; but even here, with our present knowledge of the mechanism of these cases, it seems that I should prefer a case of occiput posterior rather than one with the face presenting.

RECENT PROGRESS IN THE CONSTRUCTION OF INSANE HOSPITALS AND MANAGEMENT OF THE INSANE.

BY WALTER CHANNING, M. D.

SPECIAL TRAINING FOR INSANE HOSPITAL ATTENDANTS.

This is a subject which has from time to time attracted considerable attention in this country. It has recently been considered in a more practical manner by A. Campbell Clark, M. B., medical superintendent of the Glasgow District Asylum.[1]

The writer refers to a paper read by Dr. Clouston seven years ago, entitled On the Question of Getting, Training, and Retaining the Services of Good Asylum Attendants, which attracted considerable attention to the subject at the time and has kept it alive since that time. Dr. Clouston has a system of training for new nurses at Morningside in his infirmary, if we are not mistaken.

Dr. Clark's system is rather elaborate, consisting not only of ward instruction, but lectures and examinations as well. The first winter a course of eighteen lectures was given. An abstract of each lecture was written out on the black-board, and the class of attendants was allowed half an hour to copy it. During the winter two written examinations were held. Such questions as How to treat an epileptic in a fit; What risks does an epileptic run; and the treatment of epilepsy, epileptic insanity, bed sores, etc., were among those given. The percentage of failures was smaller than anticipated, and was chiefly among the men, who often were sadly deficient in education, and in some cases lacked ambition. An analysis of the results of this first course of lectures forced Dr. Clark to the conclusion that the lectures were aimed rather too high, but were worth continuing in a more practical form. Ward teaching consisted in the pointing out of symptoms of various forms of disease; indications for vigilance and treatment; and the preparation of brief notes by the attendants on individual cases.

The second course of lectures was followed by the attendants with unabated interest. The subject of one lecture was chiefly a pointing out of the various requisites of a good attendant. Another dwelt on the bodily diseases common to asylums; another on delusions, hallucinations, suicides, homicides; another on asylum accidents, bathing and its dangers, etc. Prizes were offered for the three best essays on hallucinations, each essayist to select three patients as a basis. The examinations were well attended and the results gratifying, and several attendants of both sexes were given first and second class certificates.

Dr. Clark offers some suggestions at the end. One is that British superintendents who are willing to give the system a trial should enter into a combination for two years. The second is that this combination shall merely experiment to the extent of supplying a special training, not compulsory, and shall give class certificates according to efficiency and duration of service. The third is, that a register of attendants, who have received certificates, be printed and circulated at the end of two or three years.

The *American Journal of Insanity*[2] publishes the paper of Dr. Clark, and in addition a letter describing a visit to the Bothwell Asylum, of which Dr. Clark is superintendent.[3] The writer speaks of the smallness of Dr. Clark's asylum, with only 180 patients, but regards this smallness as conducive to a *domesticity* which makes an experiment in the direction of special training of attendants more easy than it would otherwise be.

The last lecture to the attendants had been on Reflex Action, a decapitated frog serving for purposes of illustration. The practical bearing of this principle on disease, epilepsy for example, was explained, and all seemed interested.

Several of the attendants' note-books were examined by the writer, and the extracts which he gives from these show close observation, and are characterized by a freshness not always found in the ordinary insane hospital record book. An attendant's opportunities for observing patients are certainly much better than those of an assistant physician, and it is not unreasonable to assume that data might be obtained in this way which would be of real value if accurately recorded. The intelligence and care requisite for making reliable observations are the qualities usually found in the educated physician, and an absence of them is to be expected in the attendant, but Dr. Clark's method will serve to develop these lacking qualities.

One striking fact brought out by the recorded observations of the attendants was the propensity of women with puerperal mania to burn. A corroboration of this fact the writer found in another asylum.

A novel feature of the Bothwell Asylum was the bringing together of men and women at meals at small tables. The effect was regarded as good. For instance, an old woman "coaxed" the appetite of a boy; a male attendant succeeded in giving food to an obstreperous woman, which the female attendants could not do, and similarly a female attendant gave food to a man, which the male attendants had failed in doing.

Worthy of note at this asylum is a swimming bath thirty-one feet long by eight feet wide, and sloping gradually down from a depth of two and a half feet till a maximum depth of water of four and a half feet is reached. It is lined and floored with glazed tiles. Such a bathing arrangement could be well copied here. If I am not mistaken there have been similar swimming tanks in at least one or two of our own hospitals for the insane, but never on so large a scale or so completely finished. In summer patients would derive both benefit and enjoyment from a plunge in a good swimming bath or tank.

In the conclusion of his letter, the writer states that the veteran psychologist, Dr. W. A. F. Browne, was the first physician, many years ago, to give a course of lectures to asylum attendants.

A SOUTH AMERICAN INSANE HOSPITAL.

Dr. Dreising, of the German navy, has recently[4] given an interesting account of a visit to a lunatic asylum in Uruguay. This institution was begun in 1879, and is as yet only partially completed. The buildings inclose a large garden, which is tastefully laid out. The administration buildings also front on a court-yard laid out as a garden. The buildings are approached by very effective marble steps. The chapel is elaborately finished and very effective.

[1] The Special Training of Asylum Attendants, Journal of Mental Science, January, 1884.
[2] January, 1884.
[3] A Visit to Bothwell Asylum, by G. Alder Blumer, M. D.
[4] All. Zeitschrift f. Psychiatrie, xl., Heft 4, Der Lauder-Irrenhaus von Uruguay.

In the court behind the chapel is the bath-house, which is architecturally the most interesting portion of the buildings. It is built in the form of a half circle. From a corridor which runs the length of it a person looks down on a large cemented basin for *massen-bäder*, or baths all over, as we should say. There are various kinds of complicated douche apparatus in the corridor in separate rooms or *zellen*. Among these are the full douche, the rain douche, the circular douche, and other kinds. Over the whole there is a blue glass roof.

In the rear from this building is one of the buildings devoted to the patients, and in the lower story are the rooms or *zellen* for the excited patients. Each of these rooms has a window which looks directly out on the main recreation ground of the patients. In the upper stories are the patients' sleeping rooms, which have a floor of burnt clay. At night the light comes from gas lights, with blue glass lanterns. The patients take their meals together in a large hall with marble tables.

A small adjoining building is used for private patients, who are divided into three classes, and have rooms accordingly.

The general arrangement of the female wing is similar to that of the male. The Sisters of Charity, who preside over the institution as nurses, are able to make the female patients do considerable work. They make fine lace, and at a recent fair in Buenos Ayres took a prize for silk-spinning. The women are paid for this work, and often get together a little capital to begin life on after leaving the asylum.

The male patients also earn money as bakers, shoemakers, carpenters, cigar makers, and laborers. The cooking for the institution is all done in the institution under the supervision of a sister.

In July, 1882, there were altogether 442 patients in the asylum.

The hospital (medical) staff consisted of a doctor and two medical students in their last semester. Beside these there was one clergyman, one inspector, one secretary, one apothecary, thirteen attendants, ten Sisters of Charity, etc.

INCREASE OF INSANITY.

The recent report[1] of the English Commissioners in Lunacy is of interest in regard to this point. The increase in registered insane persons still continues, having advanced by 1923 since January 1, 1882. The total number of insane persons was 77,196, or one in every 346 of the population. This increase, which seems very large, is largely accounted for by the diminished death-rate, which has been one per cent. less during the last three years than previously. This diminution would make a decrease in three years of 1260.

"Among the private patients the ratio to population has of late years been practically stationary, but the proportion of the pauper class deemed to require care and control continues steadily to rise."

"During the last seven years, however, the increase in the annual occurrence of fresh cases of insanity, pauper and private, as indicated by the yearly admissions of new cases, . . . has not been in excess of the annual increase in the general population."

"It would thus appear that, if we take the total population, the proportion of persons attacked with insanity is not at present on the increase, and that the addition made annually to the total number of certificated insane persons maintained under care and control is due almost entirely to the accumulation of chronic cases."

Such statements as these, coming as they do from such high authority, are of great importance. And, furthermore, they are very encouraging and even surprising to those persons who have thought that insanity was increasing with great rapidity.

The experience of Scotland is even more convincing of the fact that a time may arrive when there will be only a very moderate increase in the number of cases of insanity. The Scottish Commissioners in Lunacy, in their last report,[2] state that with 10,510 insane persons, or twice the number very nearly that we have in Massachusetts, there was an increase of only 149 over the previous year. Only ten of these insane persons were added to the asylum population during the year.

Scotland may certainly be congratulated on this showing, which is so unlike any that we are accustomed to seeing. In this connection it is not out of place to call attention to the high state of perfection to which the system of Scotch lunacy management has arrived. This system shows a diminished death-rate, an increased recovery-rate, and a smaller increase of incurable patients in asylums than other countries. The chief merits of this system seem to be thorough supervision, harmony between the commissioners and medical officers of asylums, absence of restraint, unlocked doors, plenty of occupation, and very frequent visits of patients at home "on probation." Furthermore, however, Scotland is very fortunate in having an unusual number of exceptionably able men engaged at the present time in the care of her insane. As the care of the insane in this country made remarkable progress in the days of Ray, Kirkbride, Brigham, Bell, Earle, Howe, and others, so to-day in Scotland we witness a greater advance than elsewhere in the world, perhaps, from a somewhat similar combination of fortunate circumstances.

The report states, in conclusion, that "after making allowance for the increased population of the country the number of private lunatics in asylums has increased nine per cent. since 1858, and the number of pauper lunatics in asylums and similar establishments has increased eighty-nine per cent. And it is worthy of note that the proportion of pauper lunatics in asylums to the population had decreased last year to 185 per 100,000 from 188, which was the proportion the previous year. This is the first time since the establishment of the Board that we have been able to report a decrease."

In Ireland there were in all institutions for the insane, as well as work-houses, 13,821 insane persons.[3] The increase in the number over 1882 was 377. The inspectors state that these figures do not necessarily indicate a general increase of insanity throughout the country, as they were mostly of a chronic type. The decrease of the population by emigration, which leaves the mentally and physically infirm behind, causes the ratio of the insane to the sane to be higher than it otherwise would.

The latter statement may undoubtedly be a correct

[1] Thirty-Seventh Report of the Commissioners in Lunacy, March, 1883. Journal Mental Science, January, 1884.

[2] Twenty-Fifth Annual Report of the General Board of Commissioners in Lunacy for Scotland for 1883. Journal Mental Science, January, 1884.

[3] Thirty-Second Report of Inspectors of Irish Asylums, 1883. Journal Mental Science, January, 1884.

one from the point of view of the Irish administrator of charity at home. As we look at the effect of immigration in this country, however, and more especially in Massachusetts, on the increase of insanity, we see the exact opposite side of the picture. The last report of the Board of Health, Lunacy, and Charity[1] states that the large hospitals have reported on the parentage of the patients admitted, and the aggregate of their statistics is as follows: Whole number of patients classified 3414; of American parentage 1500; Irish parentage 1283; Canadian parentage 181; total of foreign parentage 1914. It will be seen from these figures that only a little more than two fifths of the insane cases, as they arise, are of American parentage. More than one third are of Irish parentage. "This shows, what has long been known from other sources, that there is an undue proportion of insane persons among the recent immigrants who reside in Massachusetts or are here temporarily." A few years hence a majority of our permanent insane hospital population will show a majority of persons of foreign parentage, and almost as many of Irish as of American descent.

In another place[2] the report speaks of an obstacle which has for some time prevented the removal of insane persons, among the recent immigrants, to the country and place from which they came. Most of these immigrants come by English steamships, all of which have surgeons appointed by the English government, and whose decision as to what passengers shall be taken on board is final. They allow many invalid and weak-minded passengers to come to Boston (so the officers of the Board have noticed), but refuse the same persons permission to return again. One case is cited in which an Irish pauper was sent to an insane hospital two weeks after landing, and although the case was a clear one the surgeon of the steamship, to whom application was made to take him home again, refused to receive him. Difficulties of this kind have this year diminished nearly one half the number of insane persons removed from Massachusetts by order of the Board.

Another writer[3] has prepared some statistics, founded on the census of 1880, which also show the large number of insane foreigners in our hospitals and elsewhere. The aggregate number of the insane in the United States in 1880 was 91,997, and of these 26,346 were foreign born, or a little less than one seventh of the population furnished nearly one third of the insane.

(To be concluded.)

— A German physician is trying to get at data of the relation between dampness of house walls and the health of the occupants of the house. He collects samples of the plaster of walls in small glass flasks, and notes their weight before and after drying them in an oven. His experiments in his own neighborhood show that the walls of inhabited rooms, practically regarded as dry, contain about one per cent. of water. This rather curious line of investigation might possibly lead to some practical result, but we imagine that it would take a very elaborate and extended series of observations to enable any opinion of any value to be formed. — *Sanitary Engineer.*

[1] Fifth Annual Report, for 1883.
[2] Page xciii.
[3] The Increase of Insanity in the United States. Its Causes and Sources. By Foster Pratt, M. D.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

S. J. MIXTER, M. D., SECRETARY.

JANUARY 2, 1884. DR. E. O. OTIS read a paper entitled

A CASE OF CYSTO-PYELITIS, OR PYELO-CYSTITIS, OR CYSTITIS COINCIDENT WITH PYELITIS.[4]

DR. INGALLS spoke of the infrequency of exploratory perineal section in Boston and vicinity, and said it was doubtful if it would have been justifiable in this case, the symptoms of which were very obscure. In case the perinephritic abscess had been aspirated and pus found, a free opening might have been made and the pus evacuated, though the general condition of the patient seems to have been such that the operation would probably have failed to save his life. Dr. Ingalls asked the reader if there was any evidence of tuberculosis found on autopsy. The reader thought not.

DR. CHEEVER said that the beginning of this case somewhat resembled a case of perinephritic abscess in his practice, caused, apparently, by exposure and sleeping on damp ground, in a person of sedentary habits. Its long course is something like pyelitis caused by stricture. The speaker had only once performed perineal section to relieve cystitis, and in that instance no relief followed the operation.

DR. WILLIAM INGALLS reported the following cases:

PREVESICAL CELLULITIS FOLLOWING HERNIOTOMY; PHLEGMONOUS ABSCESS, "SOUS OMBILICALE," IN HEURTAUX SPACE; PERINEPHRITIC ABSCESS.[5]

DR. MIXTER spoke of a case seen by him while interne at the Massachusetts General Hospital, evidently cyst of the urachus, occurring in a boy. On first aspirating the tumor a clear fluid was obtained; suppuration followed, and a free opening was made, and the cavity thoroughly drained. The tumor disappeared, and the patient recovered. Dr. Mixter also mentioned a case of umbilical abscess, the cause of which proved to be a solid mass, made up of epidermal cells, concentrically arranged, which, on dilating the small opening present in the umbilicus, was found and removed.

DR. GEORGE G. HAYWARD mentioned a somewhat similar case of umbilical abscess, in which were found several grains of wheat, apparently the cause of the abscess.

DR. BURRILL spoke of a case of perinephritic abscess occurring in a boy four months after a blow on the back. When first seen he had been confined to his bed for four weeks, and there was a large fluctuating tumor in the right loin. An incision being made at this point, a large amount of pus was evacuated, and a finger, on being introduced into the incision, could be passed upward to the kidney and downward nearly to Poupart's ligament.

DR. CHEEVER remarked that sub-muscular abscesses were much more frequent than others in the abdominal walls, being often caused by violence. It is in the space of Retzius that the bladder is aspirated in cases of retention, the operation almost never being followed by unpleasant results. Dr. Cheever mentioned the

[4] See page 290 of this number of the JOURNAL.
[5] See page 289 of this number of the JOURNAL.

case of an old man with retention from enlarged prostate. Irregular practitioners had endeavored to catheterize him, but, failing, had aspirated at the usual point above the pubes. The sharp aspirator needle was left in for four days, at the end of which time the speaker first saw the patient. At this time there was an ulcerated opening into the bladder with urinary infiltration and suppuration in the space of Retzius extending down along the sides of the bladder. Perineal section was done, but the patient died the next day. This was the only case ever seen by the speaker which might be called pre-vesical abscess.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR OBSTETRICS AND GYNÆCOLOGY.

C. P. STRONG, M. D., SECRETARY PRO TEM.

NOVEMBER 21ST. The meeting was called to order at eight o'clock. DR. F. MINOT in the chair.

DR. SWIFT presented a paper entitled

A CASE OF FACE PRESENTATION, WITH SOME REMARKS ON THE TREATMENT OF THIS CLASS OF CASES.[1]

DR. DOE inquired as to the size of the pelvis in the case reported, and asked if this abnormal presentation was not commonly found in cases of roomy pelvis, because of the relative difference in the size of the head as compared with the pelvis. He alluded to the fact that in cases left entirely to nature there was often no delay until the head came well down to the perinæum, and referred to two cases in his own practice where nature terminated the labor, one, a primipara, in twelve hours, the other, a multipara, in five hours, in both cases the delay occurring during the passage of the head over the perinæum. Should he meet with such a case again he would etherize and attempt to bring down the vertex.

DR. SWIFT said in his case, so far as he could determine, the pelvis was of normal size. He thought it quite likely that the malposition would occur in a roomy pelvis.

DR. COBB inquired as to the necessity of employing ether.

DR. SWIFT thought that it was not an absolute necessity in every case, but was certainly a great aid.

In reply to a question by Dr. McDonald, Dr. Swift said that in the case reported the diagnosis was made very early, but, of course, in this regard cases would vary.

DR. MCDONALD inquired as to the advisability of employing forceps or version instead of the operation recommended.

DR. SWIFT said that high forceps would be necessary, and the passage of the head would not be made any easier by their employment, while as to version there was the increased danger to the mother of a severe operation, and to the child the added danger of a breech presentation.

DR. PARKS asked the reader if he should ever employ forceps, having in view especially the tendency of the displacement to recur after reposition.

DR. SWIFT said that if the diagnosis was not made until the face was too firmly engaged to allow of any change in its position he should treat the case as he would any presentation of the head, and apply forceps if there were delay in the advance, although the application to the face was more difficult than to the vertex. He also stated that one of the most essential points of the proceeding he advised was, after bringing down the occiput, to hold it in its proper place until the head was so firmly engaged that the malposition could not be reproduced.

DR. HAYWARD spoke of a case he had seen in Vienna, where the patient was left unaided for twenty-four hours until the os was fully dilated, and then a modification of the axis traction forceps was used. The child was alive, but there was a tremendous caput succedaneum, which afterwards suppurated. In this case hot baths were employed to start up the pains. In another case of the same presentation, complicated by a contracted pelvis and partial placenta prævia, version was performed, and one foot brought down to plug the os, and the case was left to nature.

DR. KINGMAN inquired whether the reader would employ version or forceps in a case where the vertex could not be brought down and the chin was posterior.

DR. SWIFT replied, version. He said that the maneuver he described, to be successful, required that not only must the vertex be brought down, but the position of the body must be changed, as at the time it was in opisthotonos, and this would react on the head, and tend to reproduce the malposition. This was readily accomplished by pushing with the outside hand on the breech in such a way as to double the child up, when the head naturally tended to a position of flexion, which was desired.

In reply to Dr. Lombard, Dr. Swift said he should attempt to rectify the position in every case, whether the chin were anterior or posterior, and even if the maternal pelvis seemed roomy.

DR. LOMBARD thought authorities differed from the reader, advising that a case where everything was progressing well should be left to nature.

DR. SWIFT said that as the trouble almost invariably came when the head was low in the pelvis, and was so firmly engaged that any manipulation was extremely difficult, he certainly should endeavor in every case seen while the head was still above the brim and movable, to substitute the normal vertex presentation for the abnormal face, the more especially because the plan he suggested offered no danger, or very little, either to the mother or child, and occupied but a short time.

DR. BUNDY asked as to the frequency of face presentations, which the reader stated statistics gave as one in 250 labors.

DR. MINOT stated that when by this maneuver or by any other which gave equal safety to the child an operation such as version was avoided, it seemed to him well to adopt it, and thus free the mother from the dangers of a more serious operation. As between version and high forceps he considered version the more dangerous operation.

DR. DOE also preferred high forceps as affording better prospects for the child.

DR. SWIFT said the profession were now agreeing that for use in high-forceps cases some form of the axis traction forceps was most desirable, and especially referred to Simpson's modification of Tarnier's.

DR. HAYWARD said that in Braun's wards in Vienna a modification of Tarnier's instrument was used, and in Speath's wards Simpson's modification, and that in

[1] Vide page 293 of this number of the JOURNAL.

both places it was claimed that by their use craniotomy was in many cases avoided.

DR. BUNDY asked as to the principal cause of danger to the woman in version, which DR. SWIFT said was shock.

DR. PARKS asked as to the danger of displacing the placenta.

DR. SWIFT thought this danger was very small, as was also that arising from twisting of the cord about the child.

DR. OSGOOD asked as to the danger to the child in version.

DR. SWIFT said it was the same as in all breech cases.

DR. OSGOOD advised the more frequent use of forceps to the after-coming head without permitting any delay.

DR. MCDONALD asked the reader where, in a case left to nature, if the uterus ruptured, he should expect to find the seat of the rupture.

DR. SWIFT said at or near the junction of the cervix and body.

DR. DOE spoke of a series of reported cases of rupture, where it was found that the rent began at the external os and extended longitudinally through the cervix.

THE NEW YORK ACADEMY OF MEDICINE.

THE PUBLICATION OF PAPERS.

AT a stated meeting held March 6th a communication was received from the Council, in which it was recommended that every paper read before the Academy should be presented to the Council, and, after its approval by that body, be immediately published at the expense of the Academy, as well as inserted in the volume of Transactions published at the end of the year. After the President, Dr. Barker, had explained that this would not debar any Fellow from publishing his paper in a medical journal instead, if he preferred to do so, the recommendation was adopted.

A LIBERAL DONATION.

The Council also reported that Dr. Horace P. Farnham, for several years the treasurer of the Academy, had sent his check for $1000 to aid in paying off the $7000 mortgage still remaining on the Academy's building, and recommended that the donor should be enrolled among the Benefactors of the Academy. Dr. Farnham was then elected a Benefactor, and, after some remarks by the President the check was presented to Dr. F. A. Castle, treasurer of the Board of Trustees, who stated that he had recently received $670 for the same purpose. On motion of Dr. Hubbard it was voted to pay off $2000, and have the mortgage reduced to $5000.

THE DETECTION OF ALBUMEN IN URINE.

DR. GEORGE B. FOWLER read a paper entitled The Detection of Albumen in Urine, with a Review of the Methods Recently Advanced. The paper was illustrated throughout by practical demonstrations, and after a few introductory remarks in regard to the various kinds of albumen, he proceeded to speak first of heat as a test. If any specimen of urine contained as much as nine per cent. of albumen, he said, a solid clot would be formed on the application of heat. Neither acid albumen or alkali albumen, which were both derived albumens, instead of native, were, however, coagulable by heat; but if sufficient acid were added to neutralize the alkali albumen and sufficient alkali to neutralize the acid albumen, the precipitate would take place. It was important, therefore, to see that the urine to be tested was neither strongly acid or strongly alkaline. He had found that the smallest quantity of albumen that could be detected by heat was .2 per cent.

The next agent that he mentioned was nitric acid, which he said was capable of detecting .1 per cent. of albumen. It was important, as a rule, to boil the urine before adding acids. Ferrocyanide of potassium, in connection with citric or acetic acid, afforded an equally delicate test, and the acidulated brine method, suggested by Dr. Roberts, of Manchester, was also a good one. The smallest quantity of albumen that could be detected by it, however, was 1. per cent. (In all his experiments Dr. Fowler employed urine of a specific gravity of 1022.)

Of the new tests the one that had attracted most attention was picric acid, for the use of which the profession was indebted to Dr. Johnson, of London. It was employed in a saturated solution, about seven grains to the ounce of boiling water. The solution would stain the hands of a deep yellow color, but it was not corrosive, and could be readily washed off. After Dr. Johnson communicated this test to the Clinical Society Dr. Ralph discovered that the picric acid also had the effect of precipitating peptones when they were present in the urine; so that there was seen to be a possible source of error in connection with it. It was afterwards found, also, that if quinine was present in the urine (as was very apt to be the case when this drug was being taken in any considerable quantities), or if the urates were in excess, a precipitate would be caused by picric acid. In consequence of these facts, Dr. Johnson made a series of experiments to eliminate such sources of error, and found that the precipitates mentioned were cleared up by heat, though they were liable to return again when the liquid cooled. Picric acid, therefore, though a very delicate test, had to be used with care. When very minute traces of albumen were to be detected, it was advisable to use it according to Heller's method with nitric acid. Equal bulks of the acid solution and urine were employed; and if albumen were present the precipitate would be seen as a delicate ring between the two fluids.

Dr. Owen, of London, had proposed two excellent tests. The first was tungstate of sodium with an acidulated solution, acetic or citric acid being employed. The other, which was the most delicate test that had as yet been discovered, was potassio-mercuric iodide with an acid, and it was capable of detecting .01 per cent. of albumen. It was not original with him, but had first been mentioned by a French observer. In devising many of the later tests the aim had been to secure a practicable and convenient method for bedside use, and Dr. Owen seemed to have hit upon this in the invention of his test papers. One set of slips of bibulous paper were dipped in a saturated solution of potassio-mercuric iodide, and another in a saturated solution of citric acid. They were then allowed to dry; after which they were ready for use at any time. When the test was to be made, a slip of each kind was placed in the bottom of a test tube, and the urine poured on them; when, if albumen were present, a precipitate would be seen to be formed as the papers dissolved. On account of the ex-

treme delicacy of this test, however, it was not adapted for use in life insurance examinations, since Dr. Fowler had found that a trace, at least, of albumen was discovered by it in almost every specimen of urine to which he applied it. Whether this presence of a minute quantity of albumen in the urine of such a large proportion of individuals were due to any diseased condition or not yet remained to be determined. The following table shows the smallest amount of albumen that was detected by the various tests mentioned in the experiments made by Dr. Fowler:—

Heat	.2 per cent.
Mineral acids	.1 per cent.
Picric acid	.1 per cent.
Acidulated brine	1. per cent.
Ferrocyanide of potassium	.1 per cent.
Tungstate of sodium	.1 per cent.
Potassio-mercuric iodide	.01 per cent.

After a few remarks by the Chair, the discussion of the paper was opened by DR. E. DARWIN HUDSON, who said that his interest in the detection of albumen in the urine was chiefly of a practical nature. In the current of medical literature for the past few years he had watched very carefully for new light on the subject; but the more that he had learned in regard to the later tests proposed the more had he become disposed to adhere to the old-established methods so long familiar to the profession. After listening to Dr. Fowler's paper he could only say that he was still further confirmed in this conclusion. For the use of the busy practitioner he believed that heat and nitric acid were still the most trustworthy tests that could be used; although he had no doubt that even with these there was need of the explicit instructions which had been set forth in the paper. It was too common a practice among physicians to apply nitric acid before heating the urine, and he thought it was a good rule always to ascertain the reaction of the fluid with litmus paper, and then bring it to as nearly a neutral condition as possible by the addition of an alkali or acid as required, before proceeding to test for albumen. In any case where the symptoms were of a doubtful character it was a great mistake to dismiss the examination of the urine without resorting to the microscope if no albumen could be detected, even after repeated testings. In speaking of the objections to some of the new tests for albumen Dr. Hudson said that in the case of picric acid too much manipulation was required to avoid possible errors to make it of permanent practical value, and the test papers of Dr. Owen seemed altogether too delicate. For all clinical purposes he believed the old methods were sufficiently accurate.

DR. GASPAR GRISWOLD agreed with Dr. Hudson that the picric acid test was objectionable on account of the number of possible errors connected with it. It might be of interest from a chemical point of view to detect a minute quantity of albumen such as was shown by the potassio-mercuric iodide test, but the question was, Is it desirable, from a clinical point of view, to find these very small quantities? Albuminuria was not at the present day regarded as necessarily such a serious condition as had formerly been the case. The old tests were probably sufficient for all clinical purposes, and under ordinary circumstances heat was the most reliable if the urine was clear. It was his own practice to employ two test tubes, both of which he took care to see were perfectly clean. The urine in one was boiled, while that in the other was not, and after the boiling the two specimens were carefully compared against a black background. Afterwards he was in the habit of resorting, in addition, to Heller's cold nitric acid test. When the urine to be examined was not clear he added a fourth part of *liquor potassæ*, and filtered. If the tests for albumen were refined too much he thought they lost their practical value.

PROF. CHARLES DOREMUS thought also that cleanliness of test tubes and clear urine aided the physician more than very refined tests. When Heller's method was employed, after the addition of an alkali to render the urine clear, however, there was danger of disturbance by the ebullition of a little gas from the action of the acid, and, therefore, if it was necessary to add an alkali it was better to employ the test of ferrocyanide of potassium with acetic acid. Meta-phosphoric acid was also an excellent test.

DR. MUNN spoke of the great importance of having a properly shaded light. The way in which he arranged this was as follows: The background against which the test tube was held was a piece of black pasteboard, which was fastened immediately below a window provided with a dark shade. The shade was pulled all the way down, and the proper light was secured by holding the bottom of the shade a short distance out from the window-sill. In this way it was sometimes possible to find traces of albumen which would otherwise have escaped observation.

DR. MAXWELL made some remarks in reference to the use of the various tests, more particularly those of picric acid and tungstate of sodium, and said that he seldom or never trusted to one test alone, usually resorting to three or four different ones. Incidentally he stated that he had as yet failed to find a specimen of peptonuria. In regard to the clinical significance of these later tests, if in any case a little albumen was detected, but, after careful and repeated microscopic examinations, no casts could be found, the albumen would not be regarded as of any consequence.

DR. FOWLER then said that the object of the paper was simply to bring about such a discussion as had resulted. He was convinced that reliance should never be placed on one test alone. Heat was that which was usually tried first, but after failing to detect albumen by means of heat (or for the purpose of confirming its presence thus indicated) he thought it well to go on with some of the other tests, and he could not agree with Dr. Griswold that there was no use of investigating unexplored fields in this connection. It was only by means of these later and more delicate tests that it could be determined whether a certain amount of albumen was not a normal constituent of the urine.

NEW YORK COUNTY MEDICAL ASSOCIATION.

THE TREATMENT OF TYPHOID FEVER.

AT a stated meeting of this society, held March 17th, DR. GEORGE L. PEABODY read a paper on the treatment of typhoid fever, which was mainly devoted to a plea for the more general use of the full cold bath in this disease. As the prophylactic treatment of typhoid fever had been so fully and ably set forth in the recent paper of Dr. Janeway before the Association, he said he would confine himself to a consideration of the treatment of a few of the more important symptoms. As a disinfectant for the stools of patients and for general use in the sick room, he thought the best and

cheapest article was a solution of corrosive sublimate. It had been proved that the stools were not infectious immediately after being passed, and it was not known at precisely what period they became so; but experience had shown that after the lapse of twelve hours, at all events, they were infectious. It was also uncertain for how long a period they retained this character, but in one instance on record some workmen were taken down with typhoid fever after overturning a dung-heap under which the stools of typhoid-fever patients had been placed two years before. There was one point which was not, perhaps, sufficiently insisted upon, and that was the importance of disinfecting the contents of the intestines before throwing them into the sewer when making autopsies in the case of those who had died from typhoid fever.

One essential point in the proper treatment of this disease was that the patient should be put to bed at a very early period, and kept there until convalescence had become fully established. The importance of this matter was abundantly illustrated in the history of many hospital patients who were placed under treatment at a comparatively late period, and in whose cases in consequence the results were unsatisfactory. The bad results of late treatment were particularly well shown in the reports of St. Bartholomew's Hospital for the year 1882. After speaking of the desirability of a roomy and well-ventilated chamber, with two beds for the use of the patient, and of the greater mortality of the disease in summer than at any other season, in consequence of the higher temperature to which the patient was exposed, Dr. Peabody went on to say that it was well to humor the sick in small things as far as possible, and very important in case delirium was present that they should be gently soothed, and not forcibly restrained. Having alluded to Liebermeister's plan of administering calomel, and to the continued and systematic use of a weak solution of iodine, which, it had been claimed, materially lessened the mortality from the disease, but with which he had had no personal experience, he went on to relate the case of a willful and spoiled child in which practically no treatment was carried out, and yet in which complete recovery resulted. The temperature varied between 102.5° F. and 104.5° F. The marked impairment in digestion which was so common in typhoid fever he thought was due in some measure to the absence of saliva, so that he would advise the application of vaseline to the lips from time to time, as well as quite a free use of water. In the way of diet the main reliance was to be placed on milk, whether peptonized or not, and the patient would do well if two quarts could be taken in the twenty-four hours. Animal broths were also of service in supporting the action of the heart and the central nervous system, and in some cases rectal alimentation was called for. In regard to the use of spirits he said that they should be given early only in the case of drunkards or those habitually accustomed to alcohol. Many cases would do perfectly well throughout without any at all, but frequently they were of very great service in the later stages of the disease. In New York at the present time he thought the tendency was to resort to their use rather too early. In every case the physician was to be guided by the indications present, and in some instances it would be found that nearly a quart of spirits in the twenty-four hours would be required.

As the disease subsided he thought it was desirable to allow the use of solid food. If the proper kind of food was employed he believed there was no danger whatever in the practice, and the often-repeated assertion that an early return to solid food was accompanied by a tendency to relapse was not borne out by experience. After the intestinal ulcerations were covered with granulations the risk of perforation and hæmorrhage, he thought, was past. The muscular twitching which had been so much spoken of as a sign of ulceration did not indicate this at all. He thought it advisable that the patient should have a little meat as soon as the fever subsided, this being a food which could be digested entirely in the stomach, which was a desirable consideration in the first solid food employed. He had had no experience with the use of beef peptones.

As a rule the medical attendant's chief aim was to ward off the evil effects of long-continued high temperature. Serious parenchymatous alterations inevitably resulted from this, and Dr. Peabody's experience showed that no typhoid fever patient ever reached the third week of the disease without the occurrence of more or less granulo-fatty degeneration of the walls of the heart. The kidneys, liver, and other organs were also liable to be similarly affected, and in some instances waxy degeneration of the organs resulted. Dr. Cayley, in the Croonian Lectures for 1880, had expressed the opinion that the majority of deaths in typhoid fever were due to failure of the heart and central nervous system with resultant congestion of the lungs. The clinical indications of these parenchymatous changes incident to a long-continued high temperature had been clearly pointed out by Lauder Brunton. In order to show the superiority of the method of treatment by cold-water baths Dr. Peabody said he would first quote some statistics of cases treated under the old expectant plan. In the London Fever Hospital there were treated, during twenty years, 8000 typhoid-fever patients, with a mortality of 18.9 per cent.; at St. George's Hospital, 387 cases, with a mortality of 19.6 per cent.; at Guy's Hospital, 295, with a mortality of 19.3 per cent.; at University College Hospital, 167 cases, with a mortality of 17.7 per cent.; and at St. Bartholomew's Hospital, 635 cases, with a mortality of 16.3 per cent. At St. Thomas's Hospital the mortality amounted to 15.7 per cent., and at King's College Hospital to 12.2 per cent. In all there were 14,125 cases, with an average mortality of 17.8 per cent. At Vienna 17,000 cases were treated, with a mortality of 22.5 per cent., and at Basle, Switzerland, the mortality was 27.3 per cent. In the English army, during the six years ending with 1877, the mortality in cases of typhoid fever among the home troops averaged 24 per cent., and among the foreign troops, 40.7 per cent. In the English navy, during the six years ending with 1878, there were 414 cases of typhoid fever, with 110 deaths, a mortality of 26.5 per cent. In the United States army, during the late war, there were, among the white troops, 75,368 cases of typhoid fever, with 26,981 deaths, a mortality of 35.8 per cent., and among the negro troops 4500 cases, with 2280 deaths, a mortality of 55.6 per cent. After quoting the statistics of typhoid fever in the principal hospitals of New York, as given in the recent paper on this subject read by Dr. Francis Delafield before the Academy of Medicine, Dr. Peabody went on to say that we certainly could not be satisfied with the expectant plan of treatment unless we thought, with Skoda, that it made no difference whether typhoid fever was treated or not.

Then having spoken of the labors of John Curry in the latter part of the last century in connection with the external use of cold water in fevers, and the recent revival of the practice by Brandt, of Stetin, he proceeded to give some statistics showing the decreased mortality since the cold bathing had come into use. At the Berlin Hospital from 1848 to 1867 there were treated 2228 cases of typhoid fever, with a mortality of eighteen per cent.; while from 1868 to 1881 there were 2000 cases and 267 deaths, a mortality of thirteen per cent. If from the number of fatal cases there were deducted sixty-four which died very shortly after admission, the mortality was only 10.5 per cent. In the Prussian army the mortality among typhoid fever patients from 1868 to 1874 amounted to fifteen per cent.; while during the last seven years, when the antipyretic treatment was practiced, it was only 9.7 per cent. At Basle the mortality had been reduced from 27.3 to 8.8 per cent., at Kiel from 15.4 to 3.1 per cent., and at Stetin from 25.6 to four per cent. Brandt had reported no less than 211 successive cases without a single death. Brandt's rule was to commence the full cold bath (the temperature of the water being at from 67° F. to 70° F.) as soon as the patient's temperature, taken in the rectum, went up to 102.2° F., and Dr. Peabody thought that the adoption of this practice could not be too strongly urged. At the New York Hospital he had had a rubber bath-tub placed on wheels for use in the wards, and his own results had been quite satisfactory, although his experience was limited. He had found the cold bath useful not only in reducing the temperature but in relieving stupor, insomnia, and failure of the heart's action, and in one instance he had seen well-marked pulmonary œdema dissipated like magic by it. There was, perhaps, a greater tendency to relapse when the cold bath was used, but the relapses were not often of a serious character. It was contraindicated when there was intestinal hæmorrhage, aphonia from ulceration of the glottis, and venous congestion from chronic bronchitis or emphysema. Cold sponging in many cases, he believed, was wholly inefficient in reducing the temperature. As to the use of drugs for this purpose, he was not an advocate of the measure, since he believed that the large and frequently repeated doses of such agents as quinine, kairin, and salicylic acid which were required would have an injurious effect upon the patient if maintained for any length of time. In regard to the various complications of typhoid fever he said that he would not have time to speak, but he was convinced that they would very rarely occur in cases where the patient was systematically subjected to the cold water bath.

DR. A. FLINT, JR., advocated, on theoretical grounds, the administration of fatty substances (such as cream and cod-liver oil), farinaceous articles, alcohol, and saccharine matters, especially glucose. After speaking at some length on the causation of animal heat, and expressing the opinion (derived particularly from experiments on the pedestrian, Weston, and on his own person) that the formation of water in the body from the union of oxygen and hydrogen was a most important factor in its production, he went on to say that in fevers there was an exaggeration of the normal process Since the fever fed on the tissues of the body, it followed that these tissues must suffer very greatly unless some other fuel could be furnished to feed the flames, and the question arose, how could this be supplied? The answer, he thought, was found in the administration to the patient of the class of articles of diet which have been mentioned, and in regard to alcohol, at least, it was already well known, he said, that the temperature in fevers was reduced by it.

The President, DR. DETMOLD, remarked that in proposing, as a physiologist, to administer these hydrocarbons to typhoid-fever patients, Dr. Flint forgot that simply introducing them into the alimentary canal did not introduce them into the tissues. He had presupposed normal digestion, while in this disease, as was well known, digestion, assimilation, and nutrition were very greatly impaired, and, consequently, the fuel which was designed to feed the flames of the fever would lie inert in the intestinal tract and be discharged inert from it.

DR. E. G. JANEWAY said he feared that an erroneous impression might be derived from the statistics which Dr. Peabody had quoted in support of the advantages of the refrigeration treatment, since in Europe it was the practice to leave out of such statistics the records of all cases which proved fatal within a few hours after admission to the hospital; while this was not the case in this country. Again, in considering the high death-rate noted in the United States army, it was worthy of note that many of the cases were transported for a very long distance; it being a very common thing to bring patients in the second and third week of the disease all the way from Virginia to New York. Such circumstances as these ought always to be taken into consideration in the study of hospital statistics. Still another point. Liebermeister and others in their statistics made no reference whatever to the age of patients, while age, it was not to be forgotten, made an extremely great difference in the rate of mortality from typhoid fever. In the young the result was almost invariably favorable, but in the old, and, indeed, in all persons above the age of twenty, the disease was very much more serious. In the Mount Sinai Hospital, in which it had been noted by Dr. Peabody that the mortality was the smallest of any of the New York hospitals, the comparatively low death-rate was due, he believed, to the fact, which he had ascertained, that an unusually large proportion of children with the disease had been treated there. During an outbreak of typhoid fever a number of years ago at the Deaf and Dumb Asylum, he had treated fifty cases with only two deaths, a mortality of four per cent., and in another institution he had obtained about the same results. In these instances the small mortality was due, not to the treatment adopted, but to the fact that the disease prevailed among young subjects. At the same time he was himself a believer in the antipyretic treatment, though he thought that the mode of applying the cold water should be modified according to the circumstances and character of each particular case. In the division of Bellevue Hospital to which both he and Professor Flint were attached this had been the practice for a number of years. Dr. Janeway concluded with a few remarks on the subject of diet, in the course of which he said that he thought that the return to the use of solid food should be made with great care.

DR. A. FLINT, SR., said that there was only one point, and that not a very important one, in regard to which he differed from the author of the paper. This was as to the value of cold sponging. His observation had led him to believe that if properly carried out it was a very efficient method of reducing temperature,

though if it was not thoroughly performed it was of little use. He had also gone through the experience of Dr. Peabody with a portable bath-tub, but he had found the method extremely inconvenient, and also that, as a rule, all the advantages of the full bath could be obtained by sponging. In any case where sponging did not reduce the temperature as completely as was desired the end, he felt certain, could be attained by the use of the cold pack, the patient being wrapped in a sheet and kept thoroughly sprinkled. For several years he had pursued this plan with advantage in Bellevue Hospital, and consequently had long since dispensed with the cumbersome bath-tub. He agreed with Dr. Peabody in regard to the desirability of an early resort to the use of solid food, and thought that it was a good rule to allow the patient to have it as soon as he felt a desire for it. He did not believe that there was any specific for typhoid fever, and thought that each case ought to be treated according to the special characteristics which it manifested. In regard to the administration of alcohol, he said that he had passed through three different phases of opinion on the subject. When he first commenced the practice of medicine it was customary to starve fever patients as far as possible, and no alcohol whatever was allowed. Afterwards medical opinion went to the opposite extreme, and alcohol was given to excess, but still more recently there seemed to be a tendency, he thought, not to appreciate the advantages of the free use of alcohol in appropriate cases.

In bringing the discussion to a close Dr. Peabody said that there was an additional objection to the suggestion of Dr. Flint, Jr., and that was the difficulty that there would be in getting typhoid-fever patients to take sweet or greasy substances, since it was well known how hard it was to secure the taking of sufficient nourishment of a kind that was more agreeable to the sick. After replying to the criticisms of Dr. Janeway he remarked, in conclusion, that he did not doubt the efficacy of cold sponging if it was properly carried out, but the trouble was, according to his observation, that this was *not* done practically, as a rule, and hence he was still inclined to urge the use of the full cold bath as the most efficient means of reducing temperature in the average case of typhoid fever.

RHODE ISLAND MEDICAL SOCIETY.

QUARTERLY MEETING.

March 20, 1884. Lyceum Hall, Providence.

Dr. N. O'D. Parks read a paper on

TOPICAL CARDIAC BLISTERING IN THE TREATMENT OF ACUTE RHEUMATISM,

and recited several illustrative cases.

Case I. Mr. B. was treated for acute rheumatism by the administration of salicin, in scruple doses, with five grains of ammonia carbonate every three hours. Under this treatment he rapidly improved, and in ten days appeared to be convalescent, and resumed his ordinary pursuits. In a few days, however, a relapse was threatened, indicated by pain and swelling of the knee and tarsal joints and an endocardial murmur. A blister, five by six inches, was applied over the heart, with the happy effect of aborting the threatened relapse, all symptoms of which, including the endocardial murmur, quickly disappeared. Urine and saliva became alkaline. No return of the malady.

Case II. An old lady who, every winter, is a victim to so-called "rheumatic gout," which usually attacks each great toe in succession. On this occasion most of the joints of each foot and some joints of the upper extremities, including the metacarpo-phalangeal and phalangeal joints of both hands, were involved, with the usual accompaniment of great pain, swelling, and high fever. A blister was ordered over the heart, and the affected joints anointed with ol. gaultheriæ, which was also exhibited internally, in fifteen-drop doses, every two hours. In three days she was able to sit up, and in less than a fortnight was out driving in her buggy, handling the reins herself. No symptom of relapse.

Case III. Mrs. M., aged forty. Right toe and ankle-joints swollen and painful. Urine and saliva highly acid. Ordered ten grains of salicin and two and a half grains of ammonia carbonate, to be repeated hourly. Fly blister, four by five inches, over the heart. On the next day the left foot was attacked. Ordered salicin, fifteen grains, and ammonia carbonate, five grains, every two hours. Dressed the blistered surface with unguentum sabinæ. She did well for five days, when the right instep became swollen and painful. Blister over the heart repeated. The following day she felt much better. No pain. From this time convalescence was uninterrupted.

The history of several similar cases of acute rheumatism was given, the cure in each case being rapid and complete. The writer had tried all the modern methods of treating rheumatism, but none yielded such satisfactory results as followed the action of a blister over the heart combined with the administration of salicin or some of the salicyl compounds.

Dr. Ariel Ballou had suffered from three attacks of rheumatic fever, and had found that a blister over the heart gave relief when the fever threatened to be high. He recommended the opium treatment in muscular rheumatism, as in his experience it tended to prevent a metastasis of the disease to the heart. The treatment of this disease has hitherto been largely empirical. The speaker had gathered eighty "sure cures" for rheumatism.

Dr. Herbert Terry read a paper on

THE TREATMENT OF PUERPERAL FEVER,

founded on personal observation of eleven cases. The prevention of puerperal fever was briefly discussed. One of the most valuable prophylactic measures yet advocated is the production of a firm and continuous contraction of the uterus after the placenta is expelled. Ergot should be given in every case as soon as the after-birth is delivered, and for half an hour, at least, the hand should remain over the uterus, and any relaxation should be met by gently rubbing the uterus, cold to the abdomen, etc. After tonic contraction of the uterus is insured, and the patient thoroughly cleansed, a firm binder should be applied from the ensiform cartilage to the pubes. Ergot should be continued in smaller doses at least until the color has left the lochia.

Against vaginal douches during labor there is at least one theoretical objection. They wash away the mucus secreted during labor to aid in the passage of the head. A single injection, however, as labor begins may be advantageous.

Vaginal douches after confinement are unnecessary unless the lochia are offensive, — and then only for the

sake of cleanliness. More attention might well be paid to the condition of the napkin, as offensive discharges appear to be often due to retaining a soiled napkin. In this connection favorable reference was made to Dr. Garrigues' recent paper advocating the use of a bandage composed of lint wrung out of a one to two thousand solution of bichloride of mercury and covered with oiled muslin. Three times a day the bandage is renewed and genitals washed.

The indications for treatment in puerperal septicæmia are to keep the patient alive until the morbid process ends, and also to prevent any further absorption. For the latter purpose antiseptic intra-uterine douches are the most effectual means. When in doubt as to whether the disease is puerperal fever or milk fever, or as to the location of the point of absorption, it is a good rule to wash out the uterus without delay. If carefully done, the intra-uterine douche is as safe as the vaginal injection. The Davidson was preferred to the fountain syringe, because the direction and force of the stream are under more perfect control. The choice of a tube has to do with some of the dangers alleged against this treatment. It should be large enough to avoid entering a sinus or the Fallopian tubes, yet should not block up the os, and should be about twice the length of the ordinary vaginal nozzle. Some of the tubes used for this purpose are closed at the end, with several openings in the side directed outward and backward so that not only is the force of the stream diminished but it always flows towards the mouth of the womb. It seems important, however, that the fundus of the uterus as well as other portions should be well washed, and, to accomplish this, the hole in the end of the tube should be retained. As to antiseptics, carbolic acid may be employed in a strength of one to sixty, or even one to forty. A permaganate of potash solution of four grains to the ounce is valuable. Corrosive sublimate may be used in a solution of one to two thousand.

Alcohol, opium, quinine, digitalis, and the bromides are invaluable; but without the use of some germicide intra-uterine wash they do not promptly reduce the temperature or shorten the disease.

DR. H. G. MILLER read a brief paper on

BLEPHAROSPASM.

Although usually divided into three stages according to its degree, four varieties may more properly be recognized. The first is one of the slightest and least significant of the eye troubles for which patients seek advice. A simple spasmodic contraction of a few fibres of either the upper or lower portion of the orbicularis, and which the patient often refers to the eye-ball itself. It seems to occur most frequently in near-sighted persons.

The second form, nictitation, affects the muscles of both sides at the same time and consists in too frequent or too violent winking. This is most common in children, and is frequently thought to be a manifestation of chorea. Oftenest caused by hyperæmia of the lids or chronic papillary conjunctivitis. It seems to be frequently a reflex expression of fatigue, either of the eyes themselves or of some other portion of the organism. The excessive use of tea, coffee, and tobacco not unfrequently seem to be the exciting cause.

The third form is an exaggeration of the natural effort of the lids to protect the eyes from external injury. Photophobia, whether from hyperæsthesia of the retina or more commonly from conjunctival and corneal affections, is the most common cause of this form. What at first is a mere voluntary or instinctive effort to shield the eye from harm becomes a spasmodic contraction of surprising force and indefinite duration. It even aggravates and increases the original disease, as well as interferes seriously with its proper treatment. The practiced fingers of the surgeon can almost always successfully cope with it; but to the friends to whom the details of treatment must generally be confided it presents an almost insuperable obstacle. Even when the diseased condition causing it is cured, the palpebral opening for a longer or shorter period is left smaller and narrower than before.

The fourth form is spasm of the orbicularis, usually on one side only, clonic in its character, sometimes uncomplicated but often extending to all the muscles supplied by the facialis. In its slighter degrees, occurring frequently during conversation, it gives the patient the appearance of voluntarily adding a mysterious significance to his words, often mortifying to those so affected. In a higher degree the whole side of the face is drawn and distorted. This form is sometimes associated with tic douloureux and adds terror to an already terrible malady. Unlike the other forms which are reflex in character, this one may be of central origin.

Cases were given illustrating each of the forms of the disease.

LOSS OF SIGHT FROM INJURY OF FACIAL NERVE.

DR. O'LEARY reported a case in which the sight of one eye was completely obliterated by injury of the facial nerve. The patient, while on picket duty, received a bullet wound over the eye, barely grazing the skin.

DR. MILLER thought the loss of sight was a reflex effect from shock of the facialis.

DR. W. J. BURGE reported a case of

MALIGNANT DISEASE OF THE BLADDER,

and DR. CASWELL exhibited the specimen. There had been symptoms of vesical calculus, for which he was sounded without detecting a stone, though he passed a small one soon after leaving Dr. Caswell's office. The evacuating tube and a current of water would probably detect a stone in such a case better than an ordinary searcher. There was entire suppression of urine for four days before death. The growth extended across the bladder so as to close both ureters. The right kidney was atrophied, and the left with its ureter dilated. The tumor had the appearance of fibro-sarcoma.

EXHIBITION OF VARIOUS SPECIMENS.

DR. CASWELL exhibited six small calculi weighing together twenty-five grains, which he removed from the roof of a urinary fistula. They seemed to have formed in the passage.

DR. KEMP, of Lonsdale, exhibited a specimen of Aneurism of the Aorta with Cardiac Hypertrophy.

DR. LLOYD MORTON reported a case of Oblique Fracture of the Femur through the trochanteric portion, and exhibited the specimen. There was only a ligamentous union, but the patient was able to walk.

DEATHS.

The President announced the death of DRS. T. W. PERRY and OTIS BULLOCK. A committee consisting

of Drs. W. E. Anthony, Ariel Ballou, and E. T. Caswell was appointed to prepare resolutions on the death of each of these venerable members.

ELECTION OF FELLOWS AND DELEGATES.

As recommended by the Board of Censors, Drs. George R. Smith, of Woonsocket, and William F. Morrison, of Providence, were elected Fellows.

Delegates to the annual meeting of the American Medical Association were elected as follows: —

Ariel Ballou, G. P. Baker, P. E. Bishop, G. A. Brug, Herman Canfield, A. C. Dedrick, J. H. Eldredge, J. W. C. Ely, C. H. Fisher, S. W. Francis, James Hanaford, G. H. Kenyon, J. H. Morgan, S. O. Myers, N. O'D. Parks, A. A. Saunders, H. W. Stillman, H. E. Turner, and A. E. Tyng.

Medical and Surgical Journal.

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THE HYGIENE OF STUDY.

EX-SURGEON-GENERAL HAMMOND says that children should not be sent to school until they are ten or twelve years of age, ten at the earliest. Deferring for a moment the sanitary aspects of the question, the suggestion of Dr. Hammond as applicable to the great majority of children — those especially of mechanics, artisans, operatives who require the services of their children at an early age — would be impracticable. The Massachusetts law fixes the school age at from five to fifteen, and requires that all between those periods shall receive a certain number of weeks' instruction every year; every child *must* be in school for at least twenty weeks of the year from the time he is eight until he reaches the age of fourteen years. Among the wealthier classes, and those whose means enable them to give their children a longer term of education, there is less need of beginning school instruction till the organism is somewhat matured. As a question of the amount of learning which can be gained it is probable that it would not be much if at all diminished by retarding the time when children are sent to school. A healthy, bright boy of sixteen would get more from a book in a week than a child of six would in several months, and many parents who have kept their children from books until they were seven or eight years old have found that they have made progress in their studies rapid enough to compensate for the delay. In the earlier periods of life knowledge is chiefly gained, as in the earlier history of the race, by observation, and too rapid a stimulation of mental development is likely to be followed by arrest of cerebral growth. "The brain," says Herbert Spencer, "which during early years is relatively large in mass, but imperfect in structure, will, if required to perform its functions with undue activity, undergo a structural advance greater than is appropriate to the age; but the ultimate effect will be a falling short of the size and power that would else have been attained. And this is a part cause — probably the chief cause — why precocious children and youths who up to a certain time were carrying all before them so often stop short and disappoint the high hopes of their parents."

As regards the number of hours a day which may profitably be devoted to study there can be no fixed rule; age, temperament, sex, constitution, and state of health must be taken into account. Those of tender years, and children generally during the period of growth, are less able to bear prolonged mental application than vigorous adults; nor, as before said, is it desirable to develop the juvenile brain at the expense of other organs. Those of the sanguine and nervous temperaments (if we may use terms which are becoming somewhat obsolete) are more restive, and suffer more under the restraint necessitated by study than those of other temperaments, and (other things being equal) they learn faster, owing to predominance of the circulatory and nervous energies. Females, as a rule, are capable of less continuous study than males, and those of strong constitutions in both sexes may bear, not only with impunity, but with profit, an amount of prolonged mental work which to weakly persons might be disastrous and even fatal. The same remark may be made apropos of states of health; hard and continuous exercise of the brain demanding, in order to be truly efficient, a sound condition of the organism. The truth is obvious enough, though needing frequent inculcation, that vigor of the circulation and integrity of the nutritive and other functions — a condition, in fact, of general *bien être* attended with a flow of spirits and absence of fatigue — should accompany the endeavors of the student, being essential to the successful grasp and assimilation of knowledge, while corporal inactivity, an enfeebled circulation, even a disordered viscus, entail depression or inhibition on the noblest of the cerebral activities.

To say then how much of the diurnal cycle should be devoted to study demands a knowledge of individual constitutions and capacities, and a decision can be arrived at only by an examination of particular cases. Here parents and teachers are called upon to exercise careful judgment. For the majority of children the ordinary five or six hours of daily schooling, with their recesses and interruptions, are probably not too much. Nor must it be taken for granted that these school hours are characterized by continuous application on the part of any but a very small minority, as any one observant of the habitual demeanor of juvenile pupils will testify. There are always some who learn their lessons with surprising quickness; these require to be kept back rather than urged forward, and should be allowed much play with their study. There are many more who are in no danger of ex-

cessive mental development, will never apply themselves to their books at their homes, and need all the study hours of the legal school-day for the accomplishment of their necessary tasks.

There are other aspects of the subject which we desire to take up. Mathematics, grammar, rhetoric, and other abstruse and difficult studies should be assigned to the morning hours, when the brain is fresh and vigorous; geography, history, reading, and writing, which demand less intense application, may more advantageously come up later in the day, when the mental powers are less keen. This Dr. Higgings has suggested in a late number of the *Popular Science Monthly* (Study Physiologically Considered).

Little need be said about the necessity, recognized by all institutions of learning, of bodily exercise, and it were better almost that the boy should grow up a dunce than a puny, feeble, sickly man. Even in young ladies it is now being generally conceded that a robust physique is a desirable thing, and seminaries for females are provided with play-grounds and places for gymnastic exercises.

With regard to diet we cannot too strongly insist on the need of good food as a condition of effective study. There is little danger of overfeeding in children; excess is rather the vice of adults than of the young, and the appetite is generally a safe guide. "How peremptory is the demand of the unfolding organism for materials is seen alike in that school-boy hunger which after life rarely parallels in intensity, and in the comparatively quick return of appetite." Herbert Spencer, in his treatise on Education, previously quoted from, makes some very practical suggestions under this head, which we shall do little more than condense. The degree of energy essentially depends on the nutritiousness of the food. Where energy as well as growth has to be maintained it can only be done by high feeding. Though a child of whom little is expected in the way of bodily or mental activity may thrive tolerably well on farinaceous substances, a child who is daily required not only to form the due amount of new tissue, but to supply the waste consequent on great muscular action, and the further waste consequent on hard exercise of brain, must live on substances containing a larger ratio of nutritive matter. And is it not an obvious corollary that denial of this better food will be at the expense either of growth or of bodily activity, or of mental activity, as constitution and circumstances may determine?

We propose to return to this subject in a future number.

DR. THOMAS TROTTER, PHYSICIAN TO THE FLEET.

IT is always a pleasure to add to one's list of friends a man whose aims are upright and whose talents distinguish him above those with whom he is in daily contact, and who at the same time is genial, warm-hearted, and well educated. That the man no longer walks the earth but lives only in his works does not necessarily diminish the pleasure in making his acquaintance. Dr. John M. Browne, U. S. N., figures in the last publication of the Proceedings of the Naval Medical Society as the author of an essay which he entitles An Hour with Dr. Thomas Trotter, Physician to the Fleet. Dr. Browne invited the attention of his hearers to the sanitary condition of the Royal Navy nearly a century ago, and to the multiform industry of a single individual, Dr. Trotter, in the acquisition of the knowledge of disease and of its cure and prevention, and in whatever pertained to the good of the service; whose indefatigable endeavors to mitigate the pernicious effects of scurvy, and eminent success in repressing the contagious or putrid fever, and whose general work of administration are so clearly, tersely, quaintly, and delightfully set forth in his *Medicina Nautica*.

Dr. Trotter's character is so charmingly set forth in Dr. Browne's essay and so illustrated by extracts from his writings, that we venture to say that its appearance has caused more than one copy of his books to be drawn from its dusty hiding place and that the charm of the *Medicina Nautica* has been found to exist equally in the other volumes.

There is a genuiness, a charming homeliness and simplicity in his mode of expression, that keeps the attention constantly alive. His devotion to duty, patient effort, pursuit of the practical, and true directness of purpose make his conclusions possessed of no other motive than fidelity to honest conviction.

New duties and responsibilities, which demanded independence of thought and self-reliance of character, were met and performed in a manner that made him an acknowledged authority. There are many evidences of his generosity, charity, philanthropy, and patriotism. Seemingly, he was a clever, ready, perceptive and receptive man, gifted with clear, strong, good sense; with an inquiring and studious habit of mind; genial, earnest, steadfast, sincere, and untiring — and his own nature was evidently of a gentle, charitable, and humane quality. Such is the description of the man drawn from his writings as summarized by Dr. Browne.

In addition one might say that he was a man of keen powers of observation, who could record facts as they existed without regard to existing theories and preconceived ideas. He saw with his own eyes and drew his own conclusions. He commenced early in his medical career to think for himself. He was very anxious, he tells us, that the subject of his Inaugural Dissertation when a candidate for the degree of Doctor of Medicine in the University of Edinburgh, in 1788, should be something that had never been noticed by any former graduate. This condition was fulfilled in his thesis *De Ebrietate ejusque Effectibus in Corpus humanun*. For this essay he received the thanks of the Royal Humane Society transmitted by Dr. Hawes, the illustrious founder of the institution, who observed that "the investigation of so important an inquiry, in a regular scientific manner, was never before thought of: it was a subject left, happily left, to be ingeniously executed and amplified by Dr. Trotter."

He possessed to a great degree the power of perceiving abuses of all sorts, and seems to have had that unusual ability of telling the evils that he saw, and desired to reform, in a manner that enlisted the sympathy of those in power, and aroused the least possible opposition in those interested by the sincerity and unselfishness of his motives. Impressment, want of uniform clothing, deficiencies in diet, improper hospital accommodations, are evils to which he returns again and again in different books, and to which he devotes even more attention than to the selfish disregard of the government for the medical officers of its navy. He does not hesitate to express himself clearly and with the authority born of an upright purpose in regard to reforms that he has at heart, as after speaking of his method of preserving water on voyages by charring the inside of the casks, he says, "I am not, however, satisfied with the attention the Victualing Board has given to this method, and it has never yet been practiced from sufficient authority."

He was a man of accurate scholarship and varied reading. The Latin authors are quoted sufficiently often to show that they had not slipped from his memory, and writers in the continental languages on the subjects which lay nearest his heart did not escape his attention, but if we may judge by the frequency and aptness of the quotations, the favorite companion of of his solitude, the prominent occupant of the shelves of his cabin, must have been Shakespeare.

To the striking peculiarities of the seaman he finds it necessary to devote much time, and begins with the earliest stage of the seaman's life: —

"The love of adventure and enterprise that so soon discovers itself in an active boy seems to prompt the first inclination for sea. . . . Among boys of this description the history of a broken sailor is accounted the finest piece of eloquence, and wherever he appears the narration of his voyages, battles, and shipwrecks are listened to with rapture. The voyages of Drake and Anson round the world are famous in this way, and eagerly read by school-boys, but Robinson Crusoe has made more proselytes to these kinds of adventures than all other mariners. His story, from first to last, is so full of incident; in all his difficulties he shows so much courage, address, and ingenuity, that the young reader fancies himself the discoverer of some great kingdom, and his imagination wanders in search of an island."

He describes the characteristics of the sailor due to the isolation of his sea life, his narrow-mindedness, his credulity and superstition, his heedlessness of the future, his peculiarities of speech, and his tendency to work upon the credulity of his hearers.

He then turns to his virtues, which, with a sailor's partiality for his own profession, he says are of the finest cast, and ends his eloquent tribute with the declaration, "Was I ever to be reduced to the utmost poverty I would shun the cold threshold of fashionable charity to beg among seamen, where my afflictions would never be insulted by being asked through what follies or misfortunes I had been reduced to penury."

Some new traits are engrafted on the character by coming on board a man-of-war, and by the custom of impressment, which he condemns as a most fatal and impolitic practice. "It is the cause of more destruction to the health and lives of our seamen than all other causes put together." Many a melancholy story is related to the medical attendant of a sailor, and it begets a sympathy that interests us the more in their recovery. Under this species of mental affliction numbers perish without any apparent disorder.

Certain other of Dr. Trotter's writings are as interesting as his essays on naval medicine. His treatise on scurvy advocates nearly the opinions of the present day, and shows him as an accurate observer, especially in his arguments against the theory of its contagious nature. It also shows the disadvantages of the naval surgeon's position, which he labored so earnestly to improve. "The author of the Observations, at the end of the last war, by no provision being made for the junior part of the Surgeons' List, was the first man of his *corps* who had to embrace the painful alternative of embarking on an African voyage. Much of the information contained in these pages was the result of his practice in that voyage. To find that it is of any service to medical science will, in some degree, repay him for the unpleasant months he spent in the unhallowed trade, and the sufferings of his constitution from an unwholesome climate." The Observations contain many interesting details of the disease, and a moderately full account of the voyage of the slaver. It is evident that the worthy doctor's inferences on the cruise were not confined to the physical effects as shown by the outbreak of scurvy, as a footnote on one page of the volume refers to Dr. Trotter's evidence on the slave trade before the Select Committee of the House of Commons, and we are delighted to find him using, at the close of the book, a now well-worn phrase, when he says that "few think they are trampling on the rights of a Man and a Brother."

The following quotation shall serve alike to show the zeal and energy of the Physician to the Fleet, and also the animated style of his composition: —

"It was of little moment whether the sallad ought to be considered as a part of the victualling or medicine; the public service demanded instant releif. Had it been in my power to command it, it should have been brought from the Land's-End in Cornwall before the fleet had so long groaned under the affliction. We have heard of a Minister ordering a train of ordnance across the country from Woolwich to Portsmouth to save time; in this manner would I have wheeled the product of every distant garden to Portsmouth, lest the tooth of a sailor should drop from his gums by a tardy conveyance of his deliverer. *Deliberat Roma, perit Sagantum.*" . . .

"The reader may smile at the idea of a Physician to the Fleet attending the stalls at a vegitable market, or perambulating the country to calculate the produce; but it never appeared to me below the dignity of the profession; nor did I consider it a mean task to serve the sallad with my own hands from the Charon's quarter-deck."

The last cases in which Dr. Trotter administered

the juice of lemons and oranges for the cure of scurvy he thought worth narrating, and they still retain an interest for us. Some time in November, 1789, eighty Irish convicts came from Newfoundland in company with the ships returning from that station to England. These convicts to the number of 130 or 140 had been shipped at Dublin some time before. "The master of the vessel in which they sailed had orders to land or dispose of them somewhere in the territories of the United States of America. Instead however of fulfilling his contract with government and obeying orders," he received money from his prisoners for their liberty and then turned them on shore at Newfoundland, where many perished in the woods from hunger and fatigue, and the remainder were finally taken in charge by the naval commander on that station and returned to England, when they came under Dr. Trotter's care.

But these extracts are all too few to give any adequate idea of the charm of his writings, or appreciation of his personality as revealed through them. As a naval hygienist he must have been far in advance of his age; the same number of the naval journal that contains the account of this interesting man contains also an account of thirty years' progress in our own navy, from which one may infer that all the improvements Dr. Trotter advocated have not yet been fully accomplished. We are reminded of Dr. John Brown's essay on Dr. Henry Marshall and Military Hygiene. Dr. Marshall and Dr. Trotter seem to have been singularly alike in their devotion to the private soldier and sailor, alike sanitarians before that word had an existence, alike in their devotion to their profession, and through it to our common humanity.

MEDICAL NOTES.

— Dr. Morris Longstreth, of Philadelphia, is delivering a course of lectures at the Lowell Institute, in Boston, on the Germ Theory of Disease. A very agreeable reception of medical men and others, to meet Dr. Longstreth, was held lately at the house of Dr. B. S. Shaw.

— The JOURNAL has previously alluded to the *couveuse* or artificial nest in use at La Maternité in Paris for containing premature and feeble infants. M. Auvard, who has recently published an account of its practical operation (*Archives de Tocologie*, October, 1883, and *Le Progrès Medical*, March 1, 1884), gives the following figures as to its record from November, 1881, to July, 1883: —

	Total.	Lived.	Died.
Premature births	93	62	31
Asthenia	6	4	2
Cyanosis	5	5	–
Œdema	25	21	4
Apparent death	4	3	1
Respiratory difficulty	5	2	3
Innutrition	3	1	2
Syphilis	4	4	–
Obstetrical operation	2	2	–
Fracture	1	1	–
Vice of conformation	3	–	3
Total	151	105	46

The fortunate results are thus seen not to be confined to cases of premature birth. In œdema the mortality was only four in twenty-one, while Professor Depaul gives sixteen deaths in twenty as the ordinary proportion in this malady.

The writer points out the infrequency with which infants weighing from 1600 to 1800 grammes are saved, in spite of most assiduous care, which of course cannot be given in a hospital as it could be in a well-to-do family in private life. Of the prematurely born in the foregoing table seventy-nine weighed less than 2000 grammes. Of these forty-nine survived, giving a mortality of thirty-eight per cent; while in l'Hôpital Cochin in 1882 the mortality in children of this weight without a couveuse was sixty-six per cent.; in the Maternité, during the two years preceding the use of the couveuse, sixty-five per cent.

— At a recent meeting of the Obstetrical Society of Edinburgh one of the speakers referred to the danger which, in his opinion, existed in the lying-in room from menstruation, saying that he believed he could trace certain cases of puerperal fever to want of proper cleanliness on the part of the nurse who happened to be menstruating at the time.

NEW YORK.

— Two brothers who died of typhoid fever within twenty-four hours of each other, at Schenectady, N. Y., were buried together on the 12th of March, and two other brothers are ill with the disease, which was caused by drinking water from a well into which a cess-pool drained. The well was ordered closed by the Board of Health. The city of Schenectady has as yet no system of sewers, and it is now proposed to have one constructed.

— Three cases of typhus fever were recently discovered in a down-town lodging house. On the 5th of March a tramp suffering from the disease was removed from there to the Riverside Hospital, Blackwell's Island, and on the 8th it was found that two new cases had become developed. They were also taken to the hospital.

— A meeting of registered drug clerks was held at the College of Pharmacy, March 11th, for the purpose of aiding in the enforcement of the pharmacy law, and the members of the association bound themselves to report to the chairman of the executive committee the names of all druggists known to them who employed unregistered clerks, or who were unregistered themselves, as well as the names of such unregistered persons.

— A reception, designed as an informal housewarming, was held by the Faculty of the New York Post-Graduate Medical School at their new building in East Twentieth Street on Friday evening, March 21st.

— During the past week the State Senate Committee on Public Health has been making an investigation into the alleged illegal manufacture and sale of imitation and adulterated dairy products, the principal attention being devoted to the subject of oleomargarine, but the results of the investigation have not yet been made public. In the course of it Dr. H. A. Pooler, of Goshen, formerly connected with the New

York Board of Health, and now a member of the Orange County Board of Health, endeavored to show that in New York the number of still-births had increased out of proportion to the natural increase of population with the increased consumption of oleomargarine, — the reported number in the year 1883 being 506 more than in 1876, — and he attributed this to the benne and cotton-seed oil used in its manufacture. He and other physicians testified to the injurious effects of nitric acid, also used in making it; but rebutting testimony was brought forward to the effect that in the diluted manner in which this was employed it was not injurious. It was also stated that boiled pork, which requires one hour and forty-five minutes longer, and boiled beef suet, which requires two hours longer to digest than melted butter, were the two principal ingredients of oleomargarine.

— Dr. E. H. Bartley, chemist to the Brooklyn Board of Health, has made a report to that body in regard to the "rock-and-rye drops," which, although flavored with fusel oil, are constantly sold at the candy shops in large quantities to school children, and in it he says: In some of these candies the oil is not thoroughly mixed or diffused, and occasionally a good-sized cavity is filled with fusel oil. Estimating that a child may buy and eat a half pound of this candy, containing 5.7 grains of the oil, it will be seen that it will take the maximum dose for an adult, and will probably experience distinct symptoms, such as dizziness, headache, or even slight intoxication. A fatal dose of fusel oil is stated by the best authorities to be from 1.4 to 1.6 grammes, or the quantity found in two pounds of this candy.

— Dr. H. T. Hanks has devised a combined day-book and ledger for physicians (published by J. H. Vail & Co.), which, on account of its extreme simplicity, will, no doubt, prove a god-send to the busy practitioner who keeps his own books. On account of this simplicity its plan is certainly preferable to any of the methods now in use among the profession, and it has the additional advantage of rendering it possible to keep at the same time an exact record of all charges and payments, complete in the minutest detail, as well as to continue the account from year to year without reëntering, so that there is no waste of space. The author's claim to have arranged in this book the most exact and labor-saving system of book-keeping ever devised for the use of the physician would seem, therefore, to be a substantial one.

Correspondence.

LETTER FROM LONDON.

London, *March* 7, 1884.

Mr. Editor, — As I intimated in a former letter, Dr. John Williams's paper On the Corroding Ulcer of the Os Uteri, which was read to the Obstetrical Society last Wednesday evening, proved very interesting.

The communication was based on three cases, two of which had been under observation for between nine and ten years, the other for about two years. In the former the conditions had probably not existed long when first seen; but in the latter case the ulcerative process may have been going on for years.

Although this disease is very rare it is undoubtedly occasionally met with and mistaken for epithelioma. It is, however, quite distinct from cancerous disease, — for throughout its course the uterus remains free and movable and the glands are not affected. The disease is characterized by discomfort and a burning sensation, but there is little or no actual pain. Hæmorrhage is unimportant; but there is a more or less constant white or brownish discharge, which is very fetid. Examination shows a small ulcer on the uterine lip, which gradually enlarges, eating away the underlying tissue until the cervix is excavated, as in cancer.

Of Dr. Williams's three cases, one died at an advanced age with hemiplegia; another of uræmia; while the third is still alive, healthy and well-nourished. She has been married twice, and contemplates a third union, — which goes to show that the "corroding ulcer" *per se* is neither fatal to life or happiness. In the case of the patient dying of uræmia from kidney disease, an autopsy was made. As already stated, there were none of the characteristic conditions met with in cancer present. Microscopic examination showed nothing different from what is found in ordinary ulcer. There was a small cell — probably inflammatory — infiltration.

In one case there was some hypertrophy, with formation of nodules around the margin of the ulcer. Dr. Williams considers that this case was one of lupus.

Another case he concluded was that of slowly progressing senile gangrene, for the arteries, especially the iliacs, had undergone calcareous degeneration and broke down under the fingers. This disease was described many years ago by Sir Charles, and his brother John, Clark. Since then little has been written about it.

The President, Dr. Gervis, thought that Dr. Williams had established the existence of such a disease as corroding ulcer of the os uteri, and that it was of great importance to distinguish it clinically from cancer in regard to the prognosis.

Dr. Priestly, looking back over his practice, thought he could remember several cases which at the time were considered cancer, but which were undoubtedly corroding ulcers.

Dr. Matthews Duncan had had a large experience, and had been studying the subject for years, but he was bound to confess that he had never seen a single case of corroding ulcer. He believed that without doubt the conditions which Dr. Williams had described were nothing else than lupus. A number of other prominent members took part in the discussion.

For my own part I do not see that Dr. Williams has established that "corroding ulcer" is entitled to be considered as a distinct disease, but rather as a generic name for all destructive ulcerations of the cervix. Dr. Williams used the word "malignant" in his paper, and afterwards explained that he meant by that term merely that the disease was not curable.

Emmet, in his very scanty remarks on this subject, considers that corroding ulcer is malignant in the usual sense of the word, but as no histological description of the condition is given, one might well imagine that he was dealing with carcinoma uteri pure and simple.

All the German authorities which I have consulted refer to Clark's original paper, and declare that if such a condition — distinct from cancroid or carcinoma —

exists it must be extremely rare; and more than one suggests that the English observers may have mistaken the disease for certain conditions of the above or lupus.

The discussion of the cold-bath treatment of enteric fever, which recently occupied two evenings of the London Medical Society, excited much interest, and, as Dr. Broadbent said, marks an epoch in the treatment of that disease. The sense of the Society was decidedly in favor of the bath, pack, or sponging, and the statistics collected by Dr. Coupland and others seemed to justify this.

A surgical ward has been opened in the children's department at Dorset House branch of the Samaritan Hospital, and placed under the care of Mr. W. A. Meredith.

Last week Mr. Meredith removed a sarcomatous kidney from a girl four years old. The tumor, which extended from above the ensiform cartilage down into the pelvis, on the right side, was first noticed by the patient's mother four weeks ago. Since then it has rapidly enlarged. The contents of the tumor was soft and almost diffluent, so that in removing the mass it was considerably broken up. The whole weighed two and a half pounds. The child died of septicæmia on the third day, and at the autopsy the lungs were found to be studded with secondary sarcomatous deposits.

Mr. Skene Keith has resigned his position as assistant surgeon to the Samaritan Hospital, and will, I understand, return to Edinburgh.

Permit me a non-professional word in closing. It is the general opinion of Americans here that the Longfellow bust recently placed in Westminster Abbey is a worthy tribute to America's greatest poet. The likeness is excellent. Lord Granville was overheard by a friend of mine to remark, when the bust was unveiled, "If my mother had given me such a head as that I might have been a poet too."

Yours truly, W. P. M.

Miscellany.

THE OHIO STATE MEDICAL SOCIETY AND MEDICAL EDUCATION.

THE Trumbull County (Ohio) Medical Society has issued a circular addressed to the "Members of the medical profession interested in the elevation of the standard of preliminary education," proposing a list of subjects in which all applicants for admission as students of medicine under the tuition of members of the State Society should be required to pass before a board of Medical Examiners appointed by the State Society. The schedule of subjects for examination is the same as that laid down in a resolution by the Medical Society of the State of Pennsylvania in 1878, and adopted in 1883.

At the meeting of the Trumbull County Medical Society called to consider this subject, the following resolutions, among others, were adopted: —

"That no member of this Society shall receive any person as a student of medicine unless he present a favorable certificate from the Board of Medical Examiners.

"That the time of study required by members of this Society shall be five (5) years, including lectures.

"That members of this Society shall recommend their students to attend only such medical colleges as either require an examination for admission similar to the one required by this Society or make the full three years' graded course of study obligatory for graduation therefrom, and otherwise endeavor to elevate the standard of medical education.

"That this Society requests the Ohio State Medical Society to adopt the foregoing schedule of requirements and to use its influence to secure legislation making the same obligatory upon persons entering their names as students of medicine in the State of Ohio."

HYDATID CYST OF THE ABDOMINAL WALL.

A CASE is reported in *L'Union Médicale* (17th February, 1884) of a somewhat unusual character, occurring in the service of M. Polaillon. The patient, aged sixteen, printer, had had no history of previous illness except a fall from a third story a year before, which had left no mark, but which had been followed in a month by the first development of the present tumor. The swelling was situated in the right iliac fossa; had always been painless except that for the few days before he came under observation there had been a little discomfort. In July, 1883, he entered the hospital with an ovoid tumor in the right iliac fossa, having its long axis parallel with the inguinal fold, non-reducible, fluctuating, and of the size of a cocoa-nut. The skin was healthy and movable. The growth seemed to occupy the thickness of the abdominal wall. The good health of the patient and the absence of any sign of bone disease made an abscess seem improbable. There was, moreover, a sonorous zone between the tumor and the liver, and there was none of that peculiar quiver on percussion which is supposed to characterize hydatid of the liver. The tumor was aspirated, giving a clear, serous, slightly yellowish, urine-like fluid, which showed, under the microscope, red and some white globules. No hooklets, but a little shred of membrane resembling that of a hydatid cyst. A few days after the puncture the patient left the hospital, but the fluid began to accumulate again, and he returned August 15th with the tumor as large as ever. A second puncture gave a fluid which showed a few hooklets. The diagnosis was then made of hydatid cyst of the abdominal wall. A free incision was made, and the cavity washed with carbolic solution, one to twenty. Two days later there was some headache, but no local pain, and but little fever. Suppuration ensued, and the pus accumulated in the sac to the size of a fœtal head. August 28th another incision of three centimetres was made, and pus flowed. Drainage and Lister dressing were used. The carbolic irrigation was repeated every two days. Occasionally the washing brought away shreds of membrane. The suppuration was moderate, and the health excellent.

During September and early October the cavity did not close, but the patient felt well, and was up daily. October 18th he was suddenly seized with pain in the iliac fossa, and the next day there was found, engaged in the orifice, a large, thick, hydatid membrane. Attempts to withdraw it by forceps tore it, but compression on the abdominal walls brought it out entire. It was followed by a gush of thick, greenish, and fetid pus. The membrane expelled was white, two to three millimetres thick; it formed an oval sac as big as a fœtal head. It was made up of layers of transparent, structureless, lamelliform substance like the fragments

which had before been washed out. On the interior wall of the sac there were no traces of other hydatid cysts. A rapid diminution of the purulent secretion followed, and November 19th the cavity was closed, the fistulous orifice was healed, and there was no retraction of the abdominal wall.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 15, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	633	212	14.56	15.20	2.24	5.76	1.12
Philadelphia	927,995	430	137	18.77	17.77	.46	6.21	4.14
Brooklyn	644,526	273	98	17.02	28.49	1.11	6.29	2.22
Chicago	632,100	—	—	—	—	—	—	—
Boston	423,800	158	57	20.16	17.64	1.68	8.19	2.52
Baltimore	408,520	171	71	22.04	13.92	.58	5.84	1.74
St. Louis	400,000	117	50	17.95	11.12	1.71	7.70	4.28
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	148	47	26.52	19.32	2.07	1.38	.69
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	94	33	19.14	12.72	3.18	2.12	5.30
Pittsburg	180,000	56	27	14.32	14.32	7.16	1.79	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	36	8	8.34	19.46	2.78	2.78	2.78
New Haven	62,882	27	8	11.13	14.84	—	—	11.13
Nashville	54,400	21	6	23.80	28.56	3.71	3.71	—
Charleston	52,286	36	8	2.78	25.02	—	2.78	—
Lowell	71,447	28	11	25.00	17.85	—	10 71	3.57
Worcester	69,442	19	9	26.30	26.30	5.26	—	5.26
Fall River	62,674	21	8	4.76	9.52	—	4.76	—
Cambridge	60,995	19	7	5.26	10.52	—	5.26	—
Lawrence	45,516	20	6	30.00	15.00	—	—	—
Lynn	44,895	9	0	—	33.33	—	10.00	—
Springfield	38,090	10	5	20.00	10.00	—	10 00	—
Somerville	31,350	10	3	—	10.00	—	—	—
Holyoke	30,515	11	4	9.09	45.45	—	9.09	—
New Bedford	30,144	9	3	22.22	11.11	11.11	—	—
Salem	29,503	17	4	23.32	23.32	—	—	—
Chelsea	24,347	7	3	14.28	14.28	—	14.28	—
Taunton	22,693	6	2	16.66	33.33	—	—	—
Gloucester	21,400	11	2	27.27	9.09	—	18.18	—
Haverhill	20,905	8	3	12.50	12.50	12.50	—	—
Newton	19,421	3	2	—	—	—	—	—
Brockton	18,323	5	1	—	40.00	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	6	3	50.00	16.66	—	—	33.33
Fitchburg	13,433	7	3	—	—	—	—	—
Eighty Massachusetts towns	408,767	105	21	13.33	19.04	—	5.72	1.91

Deaths reported 2531 (no reports from Chicago, Cincinnati, and Milwaukee): under five years of age, 862: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 434, consumption 404, lung diseases 387, diphtheria and croup 138, scarlet fever 59, diarrhœal diseases 45, measles 42, typhoid fever 41, malarial fevers 23, cerebro-spinal meningitis 21, small-pox 20, whooping-cough 19, erysipelas 13, puerperal fever 13. From *measles*, Baltimore 15, New York and New Orleans eight each, District of Columbia four, Brooklyn three, Nashville two, Philadelphia and Lawrence one each. From *typhoid fever*, Philadelphia 21, New York five, Boston three, District of Columbia, Pittsburg, Worcester, and Westborough two each, Brooklyn, Baltimore, Lawrence, and Merrimac one each. From *malarial fevers*, Brooklyn seven, New York six, Baltimore four, New Orleans three, St. Louis two, Philadelphia one. From *cerebro-spinal meningitis*, New York and Lowell three each, Lawrence two, Philadelphia, Boston, Baltimore, St. Louis, New Orleans, Worcester, Cambridge, Springfield, New Bedford, Taunton, Melrose, Dedham, and North Andover one each From *small-pox*, New Orleans 19, Pittsburg one. From *whooping-cough*, New York five, Boston three, Philadelphia, Brooklyn, Baltimore, New Orleans, and District of Columbia two each, Gloucester one. From *erysipelas* Brooklyn five, New York four, Philadelphia three, Boston one. From *puerperal fever*, New York and Philadelphia three each, Brooklyn two, Boston, Baltimore, St. Louis, Nashville, and Newburyport one each.

Two cases of small-pox were reported in St. Louis; scarlet fever 53, diphtheria 30, typhoid fever 17, and measles one in Boston; measles 16, scarlet fever six, and diphtheria five in Providence.

In 101 cities and towns of Massachusetts, with an estimated population of 1,428,666 (estimated population of the State 1,955,104), the total death-rate for the week was 17.07 against 20.31 and 18.00 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending March 1st, the death-rate was 20.3. Deaths reported 3417: acute diseases of the respiratory organs (London) 334, whooping-cough 121, measles 87, scarlet fever 75, fever 40, diarrhœa 37, diphtheria 29, small-pox (London eight, Sunderland six, Birmingham two, Liverpool and Sheffield one each) 18. The death-rates ranged from 12.1 in Norwich to 29.5 in Manchester; Birkenhead 15.5; Leicester 16.9; London 19.3; Leeds 20.1; Birmingham 21.4; Blackburn 21.7; Sheffield 21.9; Bristol 22.3; Nottingham 23.1; Liverpool 23.3; Sunderland 23.7. In Edinburgh 20.1; Glasgow 27.7; Dublin 25.7.

For the week ending March 1st, in the Swiss towns, there were 33 deaths from lung diseases, consumption 28, diarrhœal diseases 27, typhoid fever nine, diphtheria and croup six, whooping-cough five, measles, scarlet fever, and puerperal fever each one. The death-rates were, at Geneva 24.5; Zurich 17.7; Basle 12.4; Berne 27.8.

The meteorological record for the week ending March 15th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7. 23 A. M.	3.23 P. M.	11.21 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 9	30.067	27	35	17	84	98	94	92	W	NE	N	11	13	11	O	S	R	—	—
Mon., 10	30.103	30	40	23	94	62	70	75	NW	NW	NW	12	18	10	S	C	C	—	—
Tues., 11	30.280	35	42	22	74	77	96	82	NW	S	SW	6	12	12	O	O	O	—	—
Wed., 12	29.941	47	58	40	93	80	69	81	SW	SW	W	16	17	10	F	O	F	—	—
Thurs., 13	30.083	38	49	34	84	77	50	78	SW	W	SW	8	15	10	F	O	O	—	—
Fri., 14	30.304	41	47	33	65	69	100	70	W	E	N	4	4	6	O	R	R	—	—
Sat., 15	29.911	35	40	31	98	72	68	79	N	NW	NW	11	12	11	R	O	C	—	—
Mean, the Week.	30.098	36	45	29				79										43.25	78.00

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OBITUARY. DR. L. P. YANDELL.

DR. L. P. YANDELL, of Louisville, Ky., Editor of the *Louisville Medical News*, and an incumbent successively of chairs of Materia Medica and the Theory and Practice of Medicine in the University of Louisville, has recently died at the age of forty-seven. He was of a family of note in the medical profession in the South, and leaves a brother, Dr. David W. Yandell.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MARCH 15, 1884, TO MARCH 21, 1884.

BACHE, DALLAS, major and surgeon. Leave of absence still further extended seven days. Paragraph 1, S. O. 50, headquarters Department of the East, March 14, 1884.

MATTHEWS, WASHINGTON, captain and assistant surgeon. To be relieved from duty in the Department of the Missouri, and to report in person to the Surgeon-General of the Army for duty in his office. Paragraph 12, S. O. 62, A. G. O., March 15, 1884.

BLACK, CHARLES S., first lieutenant and assistant surgeon. Assigned to duty at Fort Concho, Texas. Paragraph 6, S. O. 30, headquarters Department of Texas, March 10, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MARCH 22, 1884.

STREETS, T. H., passed assistant surgeon, from Museum of Hygiene, Washington, for duty in the Coast Survey Service.

HALL, C. H. H., passed assistant surgeon, from the Naval Academy to the Museum of Hygiene.

STEWART, HENRY, surgeon, ordered before the Retiring Board.

SUFFOLK DISTRICT MEDICAL SOCIETY. SURGICAL SECTION. — There will be a meeting of the Section at 19 Boylston Place on Wednesday evening, April 2d, at 7.45 o'clock. Communication: On Operative Interference on Curved Bones in Children, Dr. E. H. Bradford.

S. J. MIXTER, *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — A Companion to the United States Pharmacopœia, being a Commentary on the Latest Edition of the Pharmacopœia, and containing the Descriptions, Properties, Uses, and Doses of all Official and Numerous Unofficial Drugs and Preparations in Current Use in the United States, etc. Designed as a Ready Reference Book for Pharmacists, Physicians, and Students. With over 650 Original Illustrations by Oscar Oldberg, Phar. D., and Otto A. Wall, M. D., Ph. G. New York: William Wood & Co. 1884.

Legal Medicine. Vol. II. Legitimacy and Paternity, Pregnancy, Abortion, Rape, Indecent Exposure, Sodomy, Bestiality, Live Birth, Infanticide, Asphyxia, Drowning, Hanging, Strangulation, Suffocation. By Charles Meymott Tidy, M. B., F. C. S., etc. Philadelphia: Henry C. Lea's Son & Co. 1884.

Spinal Irritation. Probable Cerebral Origin of the Symptoms sometimes classed under this Head. By G. L. Walton, M. D. (Reprint.) 1884.

Neglect of Ear Symptoms in the Diagnosis of Diseases of the Nervous System. By G. L. Walton, M. D. Boston. (Reprint.)

Thirtieth Annual Report of the Trustees of the State Lunatic Hospital at Taunton for the Year ending September 30, 1883. Boston. 1884.

Report of the Memorial Meeting of the Medical Society of the District of Columbia in Honor of Dr. J. Marion Sims. Held November 21, 1883. (Reprint.)

Excerpts from Prof. Hugo Schulz's Treatise on Eucalyptus Oil. Translated and Supplemented by Baron Sir Ferd. von Mueller, K. C. M. G., etc., Government Botanist in Victoria. (Reprint from Australasian Medical Gazette for 1883.) Sidney. 1883.

Ueber das Verhalten des Catgut im Organismus und über Heteroplastik. Van Dr. L. von Lesser, Privatdocenten der Chirurgie in Leipzig.

Transactions of the American Ophthalmological Society. Nineteenth Annual Meeting. Catskill Mountains. 1883. New York: Published by the Society. 1883.

What Shall We Name It? A Dictionary of Baptismal Names for Children. New York: John C. Stockwell.

Year-Books of Medical Progress. A Year-Book of Therapeutics for 1883. Edited by Royal W. Amidon, M. D. New York: G. P. Putnam's Sons. 1884.

A Short Manual for Monthly Nurses. By Charles G. Cullingworth, M. D. Philadelphia: P. Blakiston, Son & Co. 1884.

A Practical Treatise on Surgical Diagnosis. Designed as a Manual for Practitioners and Students in Medicine. By Ambrose L. Ranney, A. M., M. D. Third Edition, thoroughly Revised, Enlarged, and profusly Illustrated. New York: William Wood & Co. 1884.

Aural Complications of Inflammatory Conditions of the Nose and Throat. By Beverley Robinson, M. D. (Reprint.)

Hygienic Institutes, the Utility of their Work of Investigation, and the Need of it in this Country. By Prof. George A. Smyth, M. D.

Report of Special Committee on the Sanitary Condition of the School-Houses of the City of Lynn, December, 1883.

Clinical History of Recurrent Dropsy of the Left Middle Ear, Complicated, after Eight Years' Duration, by an Acute Attack of Monocular Optic Neuritis (Choked Disk) on the same Side, followed by General Tabetic Symptoms. With Remarks. By Charles H. Burnett, A. M., M. D., and Charles A. Oliver, A. M., M. D. (Reprint.)

Elements of Pharmacy, Materia Medica, and Therapeutics. By William Whilta, M. D. (Q. U. I.). With Lithographs and Wood-Cuts. Second Edition. London: Henry Renshaw, 356 Strand. 1884.

A Text-Book of the Principles of Physics. By Alfred Daniell, M. A., Lecturer of Physics School of Medicine, Edinburgh. London: Macmillan & Co. 1884.

The Diseases of Children. A Hand-Book for Practitioner and Students. By Armand Semple, B. A., M. B. Cantab., M. R. C. P. London. New York: G. P. Putnam's Sons. 1884.

Lectures.

INSULAR SCLEROSIS OF THE POSTERIOR COLUMNS OF THE SPINAL CORD.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.[1]

BY WILLIAM PEPPER, M. D., LL. D.,

Professor of Clinical Medicine in the University of Pennsylvania.

GENTLEMEN, — This patient has been sent to me by a friend in the city, who states that he thinks that this man has sclerosis of the posterior columns of the spinal cord or progressive locomotor ataxia. He gives the following history: He is forty years old, a farmer, married; has been married for seven years. Has one child, who is three years old and healthy. The symptoms of the present disease manifested themselves in February, 1881. While loading hay he slipped, but apparently did not hurt himself much. The following day the legs began to get stiff and numb. He, however, continued to work until August, 1882. The limbs were not as strong as before, but he was still able to do his work, and walk twenty miles in hauling hay to the city. In May of 1882 one eye began to fail, and seven months ago the second eye began to be affected. He thinks that if he could see he would be able to work as well as before. About the time that the numbness first appeared he had occasional pains in the limbs, but during the past year they have, at times, been unbearable. They shoot through the thighs like lightning, darting from one joint to another, and from one leg to the other. These pains are worse at night. About a year ago he had severe shooting pains across the forehead. He has had no pains in the arms. The parts where the pain appeared never became red and swollen. There have then been fulgurant pains through the limbs, presenting the characteristics of those met with in ataxia. With this perverted sensation there have been some numbness and tingling, some impairment of feeling, and some loss of power, with amaurosis coming on within the last year, the amaurosis being preceded by fulgurant pains in the neighborhood of the eyes.

Let us now study further in regard to the development of the symptoms. There has been no jerking of the legs. He has not lost much flesh, but the limbs are somewhat wasted. Appetite and digestion are good. He states that once in a while he has bilious spells, but does not vomit at such time unless he has sick headache. He is very subject to sick headache, having, on an average, an attack about once a month. The bowels are regular, and there is no trouble with the bladder. There is a total absence of bladder and rectal complication. The time at which these organs become involved varies, but, as a rule, they are affected sooner or later.

There has been present in this case that which is frequently met with in ataxia, namely, gastric crises, attacks apparently not dependent upon indiscretion in diet, taking cold, or other obvious cause, in which there is neuralgic pain associated with loss of appetite, nausea, and very often vomiting. Not rarely ataxic cases will be found to present attacks of this kind. In some cases they are extremely well pronounced, while in other cases the disease runs its entire course without the appearance of such attacks. I do not know that I am right in saying so, but I think that my experience will bear me out when I state that these crises are more marked where amaurosis is present and distinct. Where sclerosis of the higher centres governing the eyes makes its appearance disturbance of the pneumogastric tract is more common than when the sclerosis is limited to the posterior columns of the cord.

So much, then, for the history, which points to progressive locomotor ataxia. Let us now see if the present condition bears out this suggestion, first directing our attention to the eyes, then to the power of locomotion, and finally to the condition of the muscles of the affected part.

The right eye was the one first affected, but both are now in about the same condition. He can distinguish light from darkness, and that is about the extent of his vision. This man unquestionably has degeneration of the optic nerve and retina, but the eyes will be subjected to a careful ophthalmoscopic examination. These degenerative changes are found in locomotor ataxia when the sclerosis involves the higher centres.

He states that he has no difficulty in walking except that which is due to his inability to see where he is going. Before the eyes were so much involved he was able to walk twenty miles a day with a load of hay in all kinds of weather. The legs, he thinks, do not feel so stiff as they used to. As he walks across the floor he certainly walks very well, but, as you see, there is a certain amount of incoördination of the muscles; but when the length of time which the disease has lasted and the condition of the eyes are considered the amount of incoördination is extremely small. He is not at all giddy.

Examining the patella reflex I find that there is no response whatever in either limb. The condition of the reflex patella and ankle furnish interesting and important signs which you should always study in cases of suspected organic change of the spinal cord. As you are aware, irritation of certain areas of the skin produce certain reflex movements of the muscles of other parts of the body, so that by a study of these reflex movements the location of the disease of the cord can often be determined. Thus irritation of the skin of the inside of the thigh produces a cremaster reflex, while irritation of a patch of skin a little higher produces a reflex movement in the muscles of the abdomen. These symptoms are always worthy of study. I have been a little disappointed in the use of these signs, because I have found cases of functional disease of the cerebro-spinal axis where the patella reflex was totally lost, and yet where the course of the case proved conclusively that the affection had been one merely of anæmic exhaustion without any organic disease whatever. I find that others have observed the same thing. The law laid down as to the absolute pathognomonic value of the absence of patella reflex as a sign of advanced posterior sclerosis must be regarded as subject to exceptions. At the same time it is a symptom that possesses a certain value, and when we find, in connection with fulgurant pains and incoördination of the legs, a total loss of patella reflex we know that in all probability there are changes in the posterior columns of the cord.

In this patient the legs feel numb, but sensation is not entirely lost. This is commonly the case. A critical study of the condition of sensation, for which we

[1] Reported by William H. Morrison, M. D.

have not time to-day, might reveal that in some areas there was actual loss of sensation, while in others the anæsthesia was not absolute.

This is not an ordinary case of sclerosis. It is an example of what is called insular sclerosis. This is a rare disease. The posterior columns are affected, but not in the way that they are in ordinary locomotor ataxia. As you probably know, the earliest symptoms of this latter disease are perverted sensation, fulgurant pains, increasing incoördination of the muscles of the leg, and slight wasting, but no actual paralysis. These are the symptoms of the early stage. The disease advances up the posterior columns, following the physiological course of the fibres. As the disease involves a higher portion of the cord the movements of the arm become affected. When the disease has reached the lower cervical region the eyes become involved, and amaurosis is apt to be developed. Later the sclerosis may affect the crura of the brain, and may extend into the expansion of these columns.

In the present instance the disease has pursued a less regular course. There have been unmistakable symptoms of sclerosis, beginning in the lower portion of the cord. There has been perverted sensation, incoördination of the muscles, fulgurant pains, and loss of patella reflex; but these symptoms have not been present to such a degree as to indicate that the entire posterior column had passed a state of degeneration. If this spinal cord could be examined I have no doubt that small islands of gray degeneration would be found scattered through the posterior columns, and, corresponding with the development of the marked ocular symptoms and the severe cerebral attacks, that insular sclerosis had developed high up, possibly involving the crura, pons, or higher centres. These cases of insular sclerosis are less common and less regular in the development of the symptoms than are cases of ordinary sclerosis of the posterior columns, but they are usually recognizable with a little care.

We shall next consider the ætiology, prognosis, and treatment of this case. Of late years there has been an attempt made to establish an absolute connection between sclerosis of the posterior columns and syphilis. Erb and Rosenthal probably represent the advanced advocates of this view. The French, American, and English schools take a more moderate and fairer view of the matter. I have met with a number of cases where the most careful investigation of the individual life and of the family history has failed to reveal any evidence of syphilitic taint. In the present instance the patient positively denies ever having had any venereal disease of any kind. His father died at the age of ninety. His mother is still living at the age of ninety. His parents had ten children, of whom seven are living, and all are healthy except himself. One brother died suddenly of what was supposed to be heart disease, but he does not know what the others died of. The assumption that every case of posterior sclerosis depends on a syphilitic taint is unfounded. The question should, however, always be investigated most critically, because it has an important bearing upon prognosis and treatment. Other causes of this affection are venereal excesses, overexertion, exposure, and the like. In some cases it is impossible to discover any cause. This patient has led a life of hard work and exposure. This may have had something to do with the development of the disease. While it is true that there are a large number of men engaged in farming, and locomotor ataxia is rare among them, yet there are tendencies in certain individuals to certain forms of disease developed by this exposure. He states that he has not indulged in sexual excesses, and that he has not lost sexual desire or power. This retention of sexual powers indicates, as does the retention of control over the bladder and rectum, that the deeper portions of the cord have not become affected, and makes the prognosis more favorable. Unfortunately the disease has involved the centres governing the eyes, and I fear that we shall find that there is no chance of restoring the lost vision. If this is the case the fact that we can arrest the progress of the disease and improve the condition of the limbs affords but little satisfaction.

The prognosis as regards duration of life is, I think, favorable. As far as regards arresting and improving the condition of the limbs it is favorable, but as far as vision is concerned it is unfavorable; but in order to decide this point a careful examination of the eye-ground is necessary.

These are cases for which a great deal can be done in the way of treatment. It is, of course, of the first importance to decide whether the disease is functional or organic, whether the symptoms are due to alteration of the circulation or to actual tissue degeneration. Cases are occasionally seen which present marked symptoms of locomotor ataxia and yet recover absolutely. For instance, not long ago I saw a case like this. A man working hard, with heavy financial responsibilities resting on him, gets into the habit of eating rapidly and irregularly, and takes to using tobacco to great excess, partly for the purpose of taking the place of food which he has not time to eat, and partly to divert the mind. He soon finds that his sleep is disturbed, and that he wakes early in the morning; sick headaches appear, with vomiting spells. Then he finds that he cannot walk at night as well as usual, that his legs get tangled up under him. His gait becomes worse, and people notice it on the street, and think that he is intoxicated. There is a little peculiarity in his appearance, but vision is not particularly affected. The patella reflex is entirely lost, and the man has a high degree of locomotor ataxia. He cannot walk with his eyes shut, and walks with his eyes upon his legs. The cutting off of the tobacco, stopping work, with complete rest, and a prolonged course of careful diet, restores him to absolute health. The ataxia disappears, he gains flesh and strength, returns to his work, and there are no further symptoms of the disease. I have seen such cases repeatedly. When in a case of this kind no cause such as syphilis, excessive venery, the immoderate use of tobacco, or overwork can be found there is more reason to suspect organic change than when some such cause exists.

When a definite cause is found the first thing to be done is, of course, to remove the cause.

If there is no such special cause as has been mentioned it will be found that in the early stages of the disease absolute rest exercises an extraordinary influence over the course of posterior sclerosis. Where a patient presents fulgurant pains, impaired patella reflex, ataxia, and gastric crises you will do well to order such a patient to bed and keep him there for a long time, unless you find that he does sufficiently well with a small amount of carefully-regulated exercise. I have seen cases where there was a distinct development of

the symptoms where I could find no cause which could be regarded as having produced the disease, and where I had no doubt that there was incipient change in the posterior columns, get entirely well by absolute confinement to bed, with carefully-regulated diet, and attention to the state of the muscles. It is the rest which does the good. By this protracted rest symptoms will be relieved which can be affected by no remedies.

I saw the other day an interesting case. A man consulted me for a condition of this kind. I gave him an unfavorable diagnosis and prognosis. He then went to New York, and consulted a prominent physician of that city, who gave him the same opinion that I had done. While walking along the street he slipped, and fell and broke his thigh. This confined him to bed for nine months. When he got well of the fracture he was well of the ataxia. He got out of bed practically a well man. The ataxia and pains had disappeared, and for a considerable time there has been no return of the symptoms. I would warn you against hastily giving an unfavorable prognosis. The removal of the cause and the securing of absolute or at least considerable protracted rest should rank as the first elements of the treatment.

A course of tonic treatment is, I think, always essential. Such patients are nearly always anæmic and below par. They usually do well under large doses of iron when given in some digestible form. The iodide of iron is a valuable preparation in this disease. It is useful in those cases where there is a catarrhal condition and a tendency to pulmonary troubles. The vegetable salts of iron, or dialyzed iron, may also be given. Iron should be used in large doses and long continued. In cases where there is a syphilitic history I need not say that antisyphilitic remedies should be administered. The best form is iodide of potassium in ascending doses until a large amount is taken. You will, however, be disappointed in many of these cases, even though they are originally of a syphilitic character, for the sclerosis, when once established, often resists specific treatment, and although you may arrest the progress of the disease and relieve some of the more troublesome symptoms, especially the pain, the degenerated fibres remain degenerated, and the damage that the disease has done will not be removed. It is not like those cases in which a gumma presses upon the cord. If the gumma is removed the pressure will be relieved and the function of the cord restored. In such a case a perfect cure may be obtained.

In cases where there is no syphilitic history, and yet where, despite the removal of all ascertainable causes, the use of rest, tonics, iron, and cod-liver oil, the disease continues to progress and the irritative symptoms remain, you will find that prolonged courses of nitrate of silver will occasionally exert a beneficial influence. I shall not consider the manner in which this does good. Only under the circumstances which I have mentioned would I recommend the use of this remedy. Nitrate or oxide of silver given in large doses for a considerable period exerts a beneficial influence upon the progress of the disease.

A large number of drugs have been recommended for the treatment of this affection, but I should dread the effect of many of them upon the general health. A vast deal of harm is done by overdrugging. The same is true of the use of electricity. This remedy is usually indicated. If the patient is put to bed it is indicated to supply the necessary exercise. But if the patient is allowed to move about it is not usually demanded. The slowly-interrupted galvanic current is the one to be employed. If the pains are severe this will often relieve them.

This man's condition is one in which it is difficult to give advice. So far as the lower part of the body is concerned we should have no difficulty, but in the presence of this blindness, which I fear is due to organic change in the optic nerve and retina, we shall have to treat him without reference to the head symptoms, and endeavor to restore the power to the legs and arrest the change in the columns of the cord, with the idea that he will learn some new trade which a blind man can practice. The prognosis and treatment must be governed by the condition of the legs.

I should advise this man to go to bed, have the muscles kneaded every day, and take but little exercise. The diet should be carefully regulated. With this I should give remedies to restore the exhausted nervous force, and large doses of iron continued for a long time. I should use no iodide of potassium or other alterative.

Original Articles.

ON MILK SUPPLY IN LARGE CITIES.[1]

BY J. CHESTON MORRIS, M. D.,

Formerly Attending Physician to the Protestant Episcopal Hospital, Philadelphia.

PROBABLY few persons whose attention has not been especially called to this subject have any idea of its importance in an economic as well as sanitary point of view: and it may therefore be well to preface what I have to present to you to-night with a statement, unfortunately only approximate, as full and reliable figures are hard to obtain, of the amount of milk — or what purports to be such — required daily in our large cities.

Dr. H. A. Pooler, of Goshen, N. Y., estimates the amount sold daily in the cities of New York, Brooklyn, and Jersey City, at 500,000 quarts or 182,500,000 quarts annually. I have elsewhere shown from the statistics furnished by the Railroad Companies and the Board of Revision of Taxes, that the amount in Philadelphia alone is 57,548,470 quarts. The supply of Boston I have sought for but have not received a reply from the Secretary of the State Board of Health. But if we compare these figures with the population of the four cities named we find in round numbers as follows: —

182,500,000	quarts consumed among	2,500,000 persons.
57,500,000	" " "	900,000 "
240,000,000	" " "	3,400,000 "

or about 70.6 quarts annually, or not quite ⅔ of a pint daily for each man, woman, and child. This is rather more than the average of England, less than half that of Wales, not one third that of Scotland or Ireland, and far below that of Norway, Sweden, Switzerland, and the Tyrol, as we learn from Edward Smith "On Foods," and Brassey "On Food and Labor." We may therefore fairly conclude that this is not an overestimate of the actual supply in these cities. If we

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene, of the Suffolk District Medical Society, February 27, 1884.

now multiply these 240 millions by six cents, the *lowest* price paid by the *consumer* for the article, we obtain the amount annually paid by the inhabitants of these four cities, namely, $14,400,000 or nearly $40,000 daily. Surely then we may well pause for a moment to consider what it is that we buy at such a price, and what its real value is to us.

From Simon's Animal Chemistry, vol. ii., p. 62, we may deduce the composition of cows' milk as follows:

Water		860 parts.
Solids, Butter	36 parts	
Casein	68 parts	
Lactin, coloring matter, etc.	30 parts	
Salts	6 parts	
in all —		140 parts.
		1000 parts.

And Dr. P. Vieth in the *Analyst*, for March, 1883, gives the results of 12,430 analyses made for the Aylesbury Dairy Co. in London, during 1882, which practically accord with the above.

A quart of milk, of the average sp. gr. of 1.031 as given by Dr. Vieth, would then weigh at 60° F., about 15,092 grains, of which 12,979 grains would be water, and 2,113 solids. Of the latter there would be

Butter	543.3 grains, or nearly	1¼ oz. avoirdupois.
Casein	1,026.3 grains, or more than	2¼ oz. avoirdupois.
Lactin, etc.	452.8 grains, or more than	1 oz. avoirdupois.
Salts	90.6 grains, or nearly	one fifth oz. avoirdupois.

If we now take these quantities and value them at market rates, say roughly —

1¼ oz. butter @ 30 cents per lb.	.02
2¼ oz. cheese @ 6 cents per lb.	.01
1 oz. milk sugar @ 8 cents per lb.	.005
one fifth oz. phosphates, etc.	.005
	$0.04

we obtain a value of milk which corresponds curiously with its *wholesale price* paid to the producer in the vicinity of Philadelphia and New York and its actual minimum cost of production. The latter may readily be ascertained approximatively by estimating the average annual yield of a good dairy cow at 2000 quarts and the food required at five tons of hay or its equivalent, besides some bran, cornmeal, roots, etc., so that the farmer is only selling his hay at $15 per ton when he receives four cents per quart for his milk, besides taking all the additional labor, investment of capital, and risk of loss.

I have spoken thus of the pecuniary value, let us now consider its food value. By comparing the statements of Valentin, Lehmann, Bidder and Schmidt, Chossat, Béclard and Carpenter, as to the amount of food required daily, with the rations of the British and French armies and those of the United States (as will be seen on referring to my article in the *Philadelphia Medical Times*, June 21, 1879), and with the amount of solids as given above it will be seen that *two quarts* of fresh milk and twelve ounces of bread would be sufficient to maintain a laboring man in full health and strength, the amount of nutritive material being greater than the ration of the French cavalryman. On three quarts milk and twelve ounces bread a man would soon fatten. By comparing the cost of sufficient milk and bread to nourish efficiently a man with that of any other food we shall be struck with its cheapness. But it is not in this that its greatest value lies. It is in the exact adaptation of the various constituents, the fatty, the starchy, the saline, and the nitrogenous, to the wants of the human economy, adaptation both in proportion and kind: so that no other article comes so near to being the universal food of man. Not only does he as all other mammalia depend upon it almost exclusively during the first two years of his existence, but during childhood and adult life milk or its products are essential to our well-being, while for invalids it furnishes the most available and reliable form of nourishment, in many cases the only form. Nor does any mode of preparation enhance its nutritive value. In by far the greater number of instances it is more wholesome and nutritious, more easily digested and more readily absorbed just as it comes from its source than in any other guise. It satisfies the appetite, quenches the thirst, relieves weariness, sustains for the work more surely and quickly than anything else.

Of course its mode of administration and the quantity taken must vary with the age of the individual and the object sought to be attained. We frequently hear from patients the complaint that they do not like milk, and never did, that it never agrees with them, constipates them, etc., etc. Now, in most instances, this is merely prejudice, based sometimes on injudicious mode of taking, or on an inferior article, or on the total absorption of the amount taken which thus leaves no mass of undigested residue to act (as is the case with food containing woody fibre) on the coat of the bowel as a mechanical irritant. If milk is given in divided doses at intervals of three or four hours, to be sipped slowly, while a little bread is eaten with it, it rarely fails to agree with a healthy stomach or even to restore a debilitated one; if there is any sense of oppression it is a good plan to give one or two teaspoonfuls of liquid rennet with, or immediately after, it. While any tendency to constipation may be met by the addition of a little *cream* to the whole milk or the use of a rhubarb pill at night. The benefits of an exclusively milk diet in cases of enfeebled digestion, chronic liver and kidney disease, consumption and impaired nutrition generally, will hardly be believed by those who have not made a thorough trial of it.

Such, then, as briefly as I can give it, is the value of milk from a physiological and medical point of view. No dietary is complete without it or its products, and we all feel keenly its loss when compelled to do without it. But how shall we get it pure and good, — so perishable, so prone to change, so apt to absorb impurities, and to be the carrier of the zymotic elements of disease instead of the genial nourishment which vivifies?

In the country, in small towns and villages, we may fairly attribute the health we often see among those subjected otherwise to many privations to the ease with which this great necessary of life is procured. But as cities grow in size, as more second and third parties have to come between the producer and consumer, the difficulty of procuring reliable, nutritious milk increases. Human cupidity comes in, and the bountiful nourishment is robbed of its richness by degrees; water is added, cream is abstracted, and what is sold to the mother for her hungering babe is but the ghost of its former self. Some years ago, in the Campo Santo, at Munich, I walked through the halls where are laid the corpses of those awaiting interment. That day there were over thirty, and all but two or three were those of children. I asked my guide if any epidemic was raging. He looked surprised, and said "No." When asked how there came to be such an excessive proportion of young children, he shrugged his

shoulders and said, "Many are the children of poor seamstresses and store girls. They have little to eat themselves, and nothing to give their children; the latter are starved and die, often much to their parents' relief." As I looked at the poor, pale, pinched cheeks and wasted bodies, and thought of the effects of cholera infantum, diarrhœa, tubercular enteritis, etc., which play such sad havoc among our children in large cities, the thought occurred to me, how much of all this is the result of the miserable trash with which we delude ourselves and the poor little innocents committed to our care, calling it milk forsooth! Bad air has its victims by thousands, bad food by its tens of thousands. In New York City alone, as I am informed by Dr. H. A. Pooler, the number of deaths among children under five years of age was reduced 3673 in last year below that of 1882 in consequence, as he believes, of the improvement effected there already in the milk supply, the adulteration having been lessened to the extent of 100,000 quarts daily.

Various methods have been devised in the effort to remedy this supply of adulterated milk. Systems of inspection under governmental authority have been largely resorted to, and with excellent effect; they should be increased and made more stringent. But they are cumbersome and expensive, and too often fail to protect the very classes that need it most. The Aylesbury Dairy Company in London has a most efficient and extensive system of inspection and delivery, but this must increase the cost to the consumer. In Paris a Mr. D'Arcy has successfully introduced the method of supply in glass bottles; and in New York Mr. F. Ratchford Starr has done the same; while in Boston Mr. Burnett and others I believe are largely engaged in distributing milk by the same method. I have also been doing so in Philadelphia since 1878, and my example there was followed by a number of others, so that I feel justified by the results of experience in urging the members of our profession and others who are interested in the welfare and health of the community to endeavor to extend the use of milk shipped in glass jars.

The method which I have adopted, for which the Agricultural Society of Pennsylvania awarded me an honorary diploma in 1879, is as follows: —

The cows are well fed, and kept clean: before being milked the udders are always thoroughly freed from dirt. The milk when drawn is strained into a large can in which is suspended a smaller one filled with ice and salt, so as to cool it as rapidly as possible. It is then thoroughly stirred, so as to equalize the distribution of cream; and from a faucet at the bottom of the large can the milk is drawn into quart jars, each of which is then closed and sealed with a label bearing the name and address of the producer and the date of shipment; twenty jars are then packed in a box and sent to the city. The empty jars of the previous day are returned, cleansed, and prepared for shipment again.

The advantages of this method over the usual one among us in large cans are: —

(1.) The milk must be clean; any dirt would show at the bottom of the jar.

(2.) It is free from contamination by foul air, etc., in transit, as the jars are hermetically sealed.

(3.) Each customer gets an exact quart, as the jars must be *filled* to prevent "churning."

(4.) Each customer gets his own share of cream, neither more nor less, as it is put up before the cream has a chance to separate.

(5.) It is for the interest of each producer to send the best article he can, as his reputation — and therefore the price he gets — depends upon the quality of the article which bears his name; and he can guarantee to the consumer, as long as his label is undisturbed, the quality of the article furnished.

And this brings us to the consideration of a most important point. As I have shown, good milk *costs* four cents a quart to produce; but the competition of trade often drives the wholesale price down to three and a half or three cents. In the eyes of the dealer and too often of the too close-buying customer milk is only milk — all milk is alike — and the honest man who sends whole (pure) milk gets no more for it than his neighbor who removes half the cream, or adds a little water "to pay the freight." So long as this is the case in the estimation of the community, so long may they expect to be imposed upon. Just as soon as they recognize the justice and propriety of paying their milk producers in proportion to the quality and value of the article sold there will be no difficulty in having on our tables in large cities milk just as pure, just as good, just as sweet, nutritious, and wholesome, as if taken immediately from the spring house in the country. There is a difference too — and a great difference — in the milk produced by different breeds of cattle. Those commonly known among us may be divided into three groups: the Jersey, or Channel Island; the Devons, or long-horns; and the Durhams, or short-horn. The latter yield abundantly a rather pale blue milk moderately rich in casein, but not in cream or sugar. The Jerseys yield a smaller quantity of milk, rich in yellow cream, but poor in casein and sugar. The Devons, or long-horned red cattle, yield a white milk, nearly equal to the Jerseys in cream, and very rich in casein and sugar, and hence having the highest nutritive value. Next to them comes that from grade Jerseys: next, that from good common cows. That from pure Jerseys is deficient in casein, that from pure Durhams is watery.

I have thus, I think, called your attention to a matter of vital importance, and tried to show the way out of the great difficulties which surround the distribution of milk — pure milk — in large cities. The measure of success which has attended this method and its more and more extensive adoption lead me to hope that in the not distant future its cleanliness and superiority in every respect will put an end to the present milk-can system with all its dirt and liability to fraud and deception.

THE MILK SUPPLY OF BOSTON, AND THE BENEFIT TO BE DERIVED FROM THE SPAYING OF COWS.[1]

BY MR. LLOYD F. ABBOTT.

The milk supply of Boston may be divided into three classes: first, that brought in on the cars, and commonly called railroad milk; second, that brought in wagons from the surrounding country, and called out-of-town milk; third, that from cows kept within the city limits. Each one of these may be divided

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, February 27, 1884.

into three classes: first, from the new milch cow; second, from the farrow cow, or one that has been milked for a year or more; third, from a springer, or one with calf. The nature of the new milk is very loosening; it is well known among farmers that the first milkings given to a calf three or four weeks old will scour it to death. This milk changes as it increases in age, until at the end of a year the milk of a farrow cow becomes very astringent. This milk, if given to a calf a week old, would have exactly the opposite effect of the other. The milk of the springer gradually changes until near calving; it becomes more watery, and has a limey taste.

Let us first consider the railroad milk. The distance from the city and the number of hands through which this passes (all of which have to be paid) make the farmers' returns small. The difference between a farrow cow milked out and a new milch cow is usually from twenty to twenty-five dollars; the farmer can better afford to let his cows go dry from two to three months than to pay the difference. Railroad milk is therefore mostly produced from new milch cows and springers. Let us visit Mr. B.'s dairy. He makes milk the year round and has cows coming in constantly. Some cows may be milked up to the time of calving, but in most cases they will go dry from one to three months, — usually about two, — and will give but little milk for some time before. The low price that Mr. B. receives for his milk and the loss he sustains while his cow is giving none, make it necessary for him to use all that he can of it. This, together with the fact that he does not see or know the parties who use it, makes it natural that he should send to market milk that he would not use himself. Mr. B. commences to milk at one end of the barn; the first cow may be a new milch cow, possibly the first milkings, and will fill, or nearly fill, a can. The next may be a farrow cow that has been milked for a year or more, or may be a springer about to calve; in either case will give but little, and it will take the milk of two or three of them to fill a can. Therefore the milk from the same dairy may be of the greatest possible extremes. Mr. B., having finished his milking, the milk being at a temperature of 100° F., sets it in cold water, which will reduce the temperature to about 55° F. or 50° F. The milk is thus disposed of for the night. The morning's milking is managed in the same way, perhaps with the exception that the collector comes before there is time to cool the milk off. It is then placed in a wagon and carried from one to seven or eight miles to the depot, by which time the milk is thoroughly shaken up and the temperature has risen several degrees. If the car starts from this place the milk may be put on and iced immediately; otherwise it must wait until the train comes along, and reach a still higher temperature. When on board the cars, it is iced, and by the time it has reached the city, from eight to ten A. M., the temperature has been reduced to 50° F. or 45° F. It is then taken from the car to the milk stable, where it remains usually from one to two hours before it is prepared for the consumer and iced. In the mean time the temperature has risen several degrees. The milk remains in the ice chest until two or three o'clock the next morning, when the temperature has been again reduced several degrees. It is then loaded on the wagon and delivered to the consumer. If there is any left over it is taken home, iced, and used the next day. This milk, therefore, is from twenty-four to thirty-six hours old before it reaches the consumer, and what is left over has twenty-four hours more added to it, and still people wonder why milk does not keep longer. This is the supply which reaches the city from eight to ten A. M. There are cars which reach the city from one to three A. M., which bring the milk of the night and morning before; a part of this is used the same day, but most is not used until the following day. It therefore may be used twelve hours fresher, but oftener twelve hours older, than that reaching the city earlier in the day.

As this milk comes from so great a distance it does not pay to carry out brewery grains or refuse vegetables from the markets. The cows are fed on such fodder as is raised in the nighborhood and on meal or shorts. But the milk dealer in the city is so far from his source of supply that he knows but little or any more about the cows or the condition they are in, or upon what they are fed, than the person who uses the milk.

The producer of the "out-of-town milk," being nearer the city, receives more for his milk, which, together with the extra risk of miscarriage from the effects of feeding on brewery grains, makes it about an even thing with him whether he changes his cows once in twelve or eighteen months, or has them "come in" in that time. This milk is from new milch, farrow, and springer cows, and is produced to a great extent from brewery grains; it receives very nearly the same care as the "railroad" milk until it reaches the stable of the dealer instead of going to the depot. The driver of this team starts from twelve to one o'clock A. M., which makes it impossible to bring in the morning's milk, and as the milking is the last chore at night, but few of the out-of-town men raising their own milk, and the dairies being scattered, milk is usually collected in the morning for the next day. It will be seen that the "out-of-town" man may bring in the milk of the night before, but as a rule does not; it is usually from twenty-four to thirty-six hours old. As the "out-of-town" man goes home in the heat of the day, often reaching it at three or four o'clock, it is impossible for him to keep his surplus over. He has a certain poor neighborhood where he skippers his surplus milk, that is, sells it on the street, or from door to door, from a third to a half less than the usual price, often making up the difference with water, and the poor will buy it because it is cheap, though not so good. Several years ago, when milk was selling for eight cents per quart, I knew one man who used to make his extra milk one half water, and sell it for five cents per quart, thus making a "good thing" of it.

The milk raised in the city should be divided into two classes: first, that from cows kept to produce milk for market; and, second, that of cows kept for family use. The first class is found near breweries, or near the salt marshes, and to a great extent the food is brewery grains and rotten potatoes, or other refuse vegetables. Many who have cows keep a team to haul brewery grains and go around the market and collect refuse vegetables. The Milk Inspector, in one of his reports, mentions finding rotten potatoes in a milk stable, but as he did not find the cows eating them did not consider it a case with which he could interfere. This milk may be, and often is, delivered to the consumer warm from the cow, but is thinner in quality, and will not keep as long as milk from cows fed on whole grain, grass, or hay. In fact, the milk partakes to a great extent of the substance on which the cow is fed. The dealer realizes a good price for his milk, and can better

afford to pay twenty or twenty-five dollars difference in changing his cows than to keep one three or four months that is giving little or no milk. This milk is produced mainly from new milch cows, farrows, and light springers. It is the custom with this class of milk producers to buy a new milch cow and keep her farrow a year or more, and then get her with calf, which gives her a more suitable plumpness, by which means she is disposed of with better advantage to the butcher.

The second class of city cows are those kept for family use, usually well fed, and often overfed. A person wishing a cow for family use, not being posted in the market and no judge of a cow, usually pays a high price; if he is fortunate and secures a good one, he receives a good supply of rich milk. If he keeps a daily record of the amount of milk obtained, he will find that once in about three weeks there will be a time, sometimes affecting three milkings, that the cow will not give more than one half or two thirds as much as usual, and that after each one of these turns there will be a gradual decrease, until at the end of a year she will not give one half as much as at first, and that not nearly as good. Not giving much milk, and constantly giving less, she must be disposed of for beef at a loss, or, if the owner wishes to keep her and have her come in once a year, he must have her got with calf three months after she has come in, when the milk will decrease in quantity as well as in quality. To sum up, the owner of a cow under these circumstances is sapping the milk which he intended for his family for six or seven months, and going without for two or three months, for the purpose of getting his cow to give milk again and producing a calf, which, although the material he has consumed, if devoted to milk, would be worth a great many dollars, will scarcely bring a dollar, and often has to be given away. Besides this, the owner has to run the risk of his cow's coming in in bad shape, or of miscarriage. There is no domestic animal so liable to accidents of this kind as the cow, owing to her being milked, a disadvantage which no other domestic animal labors under. In such a case she will give little or no milk.

What I propose as a means of improving the quality of the milk, and at the same time reducing the cost of production, is the spaying of cows for milk, an operation but little known even among veterinary surgeons. After two years' experience and inquiry I have been unable to find any one in Boston familiar with the operation. It consists of removing the ovaries from a new milch cow, which takes away all desire or ability for reproduction, and makes of her a constant milker ever after. These are some of the advantages gained by the operation: first, an increase in the quantity of milk, as the animal has nothing else to do but give milk or grow fat, and by giving milk-producing food the quantity may be increased a third. Secondly, the certainty of having a constant supply of milk of the same quality. Thirdly, producing a richer milk and of even quality, as the animal is always in the same condition, all causes of change having been removed; this alone is inestimable in its advantages to the sick, or delicate children. Without this operation milk obtained from a new milch cow under the most favorable circumstances will vary much; once in three weeks there will be a time often affecting three milkings that the milk is at fever heat, and will not keep as long by one third as when the animal is in the ordinary condition. It is not an uncommon occurrence for a person in delicate health, or a child, fed on a milk diet, although the milk be from one cow, and the greatest possible care taken of it, to have a bad day or a feverish night, for which no reason can be assigned, but which may be traced to such a cause as this. Fourthly, decrease in the cost of keeping, for by the operation causes are removed which produce waste of material that now goes to milk. Fifthly, by this operation cows may be kept for years, giving the same quantity of milk, thus avoiding the loss sustained while the cow is dry and the liability to accidents during calving. Sixthly, the spayed cow fattens more easily, its flesh is better than that of the ox, more tender and more juicy; indeed, no one is ignorant of the fact that all domestic animals, female as well as male, deprived of their procreative organs, fatten more quickly than those that retain them, and the flesh of the spayed female is more tender and juicy than that of the male. By this means the farmer will realize a better price for his cows when they have passed their days of usefulness as milkers, and the public will be protected from a practice often resorted to by farmers to obtain the best possible price for old cows, that is, to bring them to the bull, intending that gestation should give them more suitable plumpness, so that they may be disposed of to better advantage to the butcher. The result of this is mere bloated, flabby flesh, which easily taints; broth made from it is not rich, and is without flavor.

I first became interested in this operation early in 1880, through information obtained from a work translated from the French. I afterwards obtained other treatises on this subject, and soon became convinced of the advantages to be obtained by it. I made inquiries among veterinary surgeons, but could find none familiar with the operation. While making inquiries upon this subject I learned that Hon. Josiah Quincy had had the operation performed at his farm in Quincy nearly twenty years ago. I was told that it was a failure. To ascertain the facts in the case, I called on him at his home. He told me that spaying was performed under the direction of his foreman, and that although he lost a number of cows by the operation he considered it a success, and of great benefit to both the producer and the consumer of the milk; that the cows continued to give a large quantity of milk for a number of years, and that the milk was of a superior quality. It is by his permission that I refer to this. He also informed me that at one time he thought of publishing an article calling the attention of the public to the advantages of this method of producing milk.

My experience teaches me that it will increase the flow of milk and also improve the quality, and that although there will be a slight decrease at the end of a year, the daily average will be equal to that given at the time of the operation. I have one cow that was spayed in November, 1880, was then giving ten and one half quarts per day, and now, after nineteen months of constant milking, nine and a half quarts, and she now comes to the barn every night with milk flowing from her bag. To make a comparison: I have talked with those who have had a longer experience in keeping cows than I have. They all agree that this is a liberal estimate: a cow giving fourteen quarts of milk when she comes in is an extra good one; that at the end of ten months (she coming in once a year) she

would not be giving more than three or four quarts, and that not suitable for use, at which time she should be dried off and not milked the other two months; or that an average of nine quarts a day for ten months and none the other two months is all that could be expected, and that this result can be obtained only under the most favorable circumstances. This would give 2736 quarts. Now I claim that under this operation a cow giving fourteen quarts may be made to average that for three hundred and sixty-five days in the year, as she would increase enough after the operation to make up for any slight shrinkage at the end of the year, making 5110 quarts against 2736 and also better milk.

I do not wish to lead any one to think that this operation is without risk, but after two years of practical experience I am convinced that the risk, when the operation is properly performed, is less than in ordinary cases of calving.

A YEAR'S EXPERIENCE IN TRACHEOTOMY.

BY GEORGE W. GAY, M. D.

DURING the year 1883 I performed tracheotomy twenty-one times for croup. Eleven patients recovered. All but one, a fatal case, were treated in the City Hospital. The cases were not selected, every one coming under our charge being operated upon if requiring it.

Many of the patients had diphtheritic croup, a few membranous, and, occasionally, it was not easy to make an exact diagnosis. Cases presenting enlarged glands and a nasal discharge early in the disease were undoubtedly diphtheritic. On the contrary, cases beginning as an ordinary cold, with no membrane visible in the fauces, no septic symptoms, but having a severe and constant dyspnœa, were called membranous croup. It is not of the utmost importance that much time be spent in discussing the difference between the two varieties of croup, considering the fact that both are extremely dangerous to life, and that both demand essentially the same treatment. Suffice it to say, that all of the cases presented severe and continued dyspnœa, due to an acute laryngeal obstruction of from one to five days' duration.

One patient was twenty-four years old (died); the age of the others varied from eleven months to nine years; a majority were four or five years old. The youngest who recovered was three.

The duration of the disease at the time of the operation ranged from one to eight days; the dyspnœa from one to five days. As a rule the shorter the period of obstructed respiration the more favorable the result.

No ether was used in eight cases, and only a few whiffs in the others; merely enough being given to partially control the struggling and fright. Generally the patient had rallied from the anæsthetic before the tube was secured in its place.

Two children died of shock and septicæmia a few hours after the operation; the other fatal cases survived from two to five days. None died from hæmorrhage. Death resulted from either bronchitis or blood-poisoning. Every case but one derived more or less temporary relief from opening the trachea, and, so far as I know, no life was shortened by the operation. The upper rings of the trachea were usually incised, and also the isthmus of the thyroid, if necessary. In a baby lately operated on at the age of nine months the cricoid cartilage was divided with the result of greatly facilitating the introduction of the tube.

Venous hæmorrhage was quite free in many cases, but no trouble was ever experienced from blood getting into the bronchi. By inserting a tenaculum or hook into the trachea just below the cricoid cartilage and lifting it up the windpipe is under control, and it is not necessary that the rings be exposed before they are divided. At all events I have not found it to be so in many of my later operations. Beginners, however, had better see the rings before they cut them. The tube having been secured by tape, a piece of cotton flannel spread with cosmoline is placed between the plate and the skin to prevent irritation.

After Treatment. Milk, ice cream, and beef tea were the favorite articles of food. Nourishment was also administered by the rectum. Alcohol was never given unless the patient exhibited symptoms of marked exhaustion, when champagne was added to the diet. Several of the successful cases received no liquor during the treatment. Quinine and aromatic spirits of ammonia were given in every instance, while iron and chlorate of potash were not resorted to.

Next to nourishment, I consider *steam* to be the most important part of the treatment. It is conducted from the radiator through a rubber tube, and directed upon the neck of the patient. The vapor is warm, moist, and does not condense in sufficient quantity to saturate the clothing. Atomized or medicated liquids are not used at present. Lime water often produced a disagreeable erythema of the face, and thinking that possibly it might act as an irritant to the air passages, pure steam was substituted, and so far it seems to act as favorably as did any of the sprays formerly in vogue.

In all cases the patient received steam half the time, while to the more serious it was constantly supplied. The very great benefit derived from breathing the warm vapors was demonstrated beyond a doubt in many instances. Under its use the secretion would soften, the respiration would become easier, the child would become quiet, and fall asleep. The importance of a constant and generous supply of steam cannot be overestimated in this affection.

In the favorable cases the tube was worn from six to fifteen days; the average time being nine days and a half. I have found the most satisfactory way of getting rid of the tube to be as follows: At the end of a week, if the respiration is free, the tube is taken out quietly, and the child is let alone. No trials are made to see if he can breathe through his mouth. As the tracheal wound contracts natural breathing through the larynx is gradually restored. With one exception this plan has worked well. In the case of a little girl, after the tube had been taken out, occasional attacks of dyspnœa would come on, which were relieved by the nurse's opening the wound with the dilator, and turning on more steam. The child soon learned to call for this instrument whenever she felt an attack approaching. The use of the tube was not again resorted to, and in a few days the dyspnœa ceased, and the patient recovered.

I cannot close this paper without calling attention to the very great importance of having intelligent, skillful, and devoted nurses in charge of these patients. Two sets are necessary, one for the day and another for the night, and they should have received special instruction in taking care of the tube, and also in re-

moving or replacing it in an emergency. I cannot but feel that my success during the past year was due in no small measure to the admirable care which the patients received from the nurses of the hospital training school.

RECENT PROGRESS IN THE CONSTRUCTION OF INSANE HOSPITALS AND MANAGEMENT OF THE INSANE.[1]

BY WALTER CHANNING, M. D.

CARE OF THE CHRONIC INSANE.

This is a subject which every year thrusts itself more and more on the public attention, and must continue to do so for some years to come. The opinions of alienists have been very different in regard to it, but they are gradually becoming more harmonious. Experiments of various kinds have been tried, the Williard plan proving the most successful, but not always the most practicable.

An often-proposed plan, now meeting with especial favor because of its expediency, so dear to the public heart, is that of the erection of additional buildings in connection with existing asylums. The last report of the Board of Health, Lunacy, and Charity [2] considers our present hospitals too large and too much occupied by the incurable insane to furnish the best treatment for curable cases. The Board favor the erection of small hospitals for the particular treatment of recent cases, leaving, it is to be inferred, the present hospitals filled with the chronic cases. Dr. Earle, superintendent of the Northampton Hospital, has recommended the building of a small hospital on the land owned there by the State.[3] The site spoken of is excellent, and the plan looks feasible. In Dr. Earle's opinion if there were no insane hospitals at all in the State it would be well to build ten or twelve small ones, judiciously scattered about the State, instead of the five large ones we have at present.

The "annex," as he would call the small one to be connected with his present hospital, would be about a quarter of a mile distant. It would have no independent barn, stables, laundry, etc., but would otherwise be erected like an entirely separate institution. The effect would be to give the hospital "the combined advantages of both a large and small institution."

In the "annex" the recent or curable cases should be treated, while the incurables would be cared for in the old hospital building.

At the Connecticut Hospital for the Insane the *chronic class* have been provided for in a supplemental building [4] for two years, the plan being the reverse of that recommended by Dr. Earle. This experience convinces Dr. Shew, superintendent of the hospital, that the plan of supplemental buildings is the true solution of the problem of how best to provide for the chronic insane. Dr. Godding has adopted the same plan at the Government Hospital for the Insane at Washington, D. C., and the State of Illinois has adopted it at Jacksonville.

Dr. Shew has found his supplemental buildings so successful that he wishes for another in which to place the sixty-seven epileptics now in the hospital under his charge.

Dr. R. S. Dewey [5] in a paper read last September before the Conference of Charities urges the adoption of the separate building plan for all classes of the insane. Among other arguments he presents is that of greater cheapness. Every State, he says, with 1,000,000 inhabitants has now, or soon will have, 2500 insane persons to provide for. The average cost *per capita* of the congregate or linear hospital, will be $1000, or $2,500,000 as a first appropriation for buildings alone. On the other hand, very good and substantial detached buildings, generally two stories in height, have been erected for sums varying from $200 to $500 per patient, or about one third the cost of the congregate asylum *per capita*.

FORCED FEEDING OF THE INSANE.

For a number of years, as well as at the present time, one of the fundamental principles in the treatment of the insane has been the administration of the most liberal nourishment, both in quality and quantity. Dr. Clouston has recently called particular attention to the subject.[6] He has given enormous quantities of eggs and milk, often a dozen of the former and six or seven pints of milk daily. This is an excess of nourishment, as he would formerly have thought, and even now food must be given in a hap-hazard sort of way, but he has seen patients gain two or three stone in weight, and acquire nervous stability, on the liberal diet he speaks of.

In America the subject of properly nourishing the insane by force, if not otherwise, was incidentally considered at the meeting of the superintendents of American Hospitals for the Insane, held in 1883. At this meeting Dr. Rogers read a paper,[7] in which he spoke of the need of abundant nourishment in mania and melancholia. "Food," he said, "may be given by the stomach pump, or nasal tube with a fountain syringe. . . . The will of the patient not to take food or medicine should never be an obstacle to the physician."

Dr. Hurd described at the same meeting in a paper read by him [8] the apparatus used by him in forced alimentation through the nose. This apparatus consists of a Jacques or Nélaton soft rubber catheter attached to the largest-sized Hall's health syringe. The catheter is passed through the nostril and food is injected by pressure upon a bulb provided with a valve.

In the discussion which followed the reading of Dr. Rogers's paper on the Therapeutics of Insanity, Dr. T. W. Fisher spoke strongly in favor of the use of the nasal tube, and said that the patient should be fed three times a day with large quantities of nutritious, liquid food. He had recently had very favorable results in nearly a dozen cases. In several he thought life was saved by the artificial feeding. Dr. W. W. Godding thought that it was almost criminally wrong to allow a patient to remain for more than a short space of time without food. Dr. J. W. Draper believed in the necessity of forced alimentation. Dr. W. B. Goldsmith thought that a large amount of food was necessary in acute maniacal excitement, but in melancholia with stupor and less

[1] Continued from page 297.
[2] Fifth Annual Report, for 1883.
[3] Annual Report State Lunatic Hospital at Northampton, 1882.
[4] Eighteenth Annual Report of the Connecticut Hospital for the Insane for the Year 1883.
[5] Congregate and Segregate Buildings for the Insane.
[6] Annual Reports of the Royal Edinburgh Asylum for the Years 1881, 1882.
[7] Report on the Therapeutics of Insanity, by Joseph G. Rogers, M. D., American Journal of Insanity, January, 1884.
[8] The Minor Treatment of Insane Patients, by Henry M. Hurd, October, 1883.

exhaustion and waste, he thought a fourth as much nourishment would be sufficient. His practice was to put a patient in bed while he was fed with a tube, as his circulation and general nutrition would then be better. Dr. Catlett thought it best not to feed too soon, but ultimately if necessary. Dr. Hill used both the nasal and stomach tube in feeding, but tried moral suasion with patients first. Dr. Gale used the nasal and stomach tubes, but resorted to every other device first. Dr. Steeves thought it easy to fall into a perfunctory habit of using the tube, and continuing its use too long. A patient may at any time be induced to take food, and various expedients should be resorted to to restore the habit.

The above and other members of the Association spoke on the subject of administering food to the insane. The articles chiefly recommended to feed with were milk and eggs, sometimes beef extract; combined with these things stimulants and tonics.

An elaborate and interesting contribution to the same subject has appeared in recent numbers of the *Archiv für Psychiatrie*, etc., by Dr. F. Siemens, Director of the Provincial Lunatic Asylum at Ueckermünde.[1] In the last number he says refusal of food by the insane is often a symptom of diminished tissue change and lack of assimilative power, and in such cases feeding should not be pushed too far. It is questionable if forced feeding attended with struggles and exhaustion on the part of the patient does not do more harm than the food does good. Melancholic patients with stupor are like animals dormant in winter, and a lessened amount of nourishment makes little difference to them.

The abstinence from food in typhoid fever is interesting as bearing on the question of nourishment for the insane. In this fever we see a patient live for weeks on almost no nourishment. From the investigations of Chossat it appears that until forty per cent. of weight has been lost life does not become extinct, and taking the supposed daily loss of weight, it would require a period of eight weeks in an average case of fever before death would ensue from this cause. The elevation of the temperature in the fever, a product of the combustion of tissue, would appear to be a means of prolonging the life of the emaciated patient. Cohnheim has said that *die febrile consumption als unmittelbare Todesursache keine zu grosse Rolle spielen.*

Numerous cases are to be found scattered through the writings of various authors, of prolonged abstinence from food. Among these are Falret's case of a forty days' fast; Wiegand's case of an insane person who lived for sixty-three days without food. Sondèn described a case in which only snuff was used for three weeks, and then for a period of thirty-five days nothing but water. The patient continued the entire time fresh and cheerful, although "sein Bauch ganz und gar einsank." He finally began to eat ravenously, and without the least injury. Bourneville's idiot fasted for twenty-eight days, during which time he had no passage of the bowels, little urine, no vomiting, fever, or pain. When three years old he fasted for three weeks, which seems to show that mentally defective children can endure abstinence better than healthy children.

Stolz, and later Schlangenhausen, described a remarkable case in a Tyrolean insane asylum. The patient was an old woman. She weighed, on admission, one hundred pounds, having previously fasted at home. She was fed artificially, but her weight sank to sixty-six pounds. She then fed herself, and her weight increased to ninety-six pounds. According to Schlangenhausen she was twenty-three years in the institution. She was fed with the tube 12,037 times, and for an unbroken period of twelve years, and her weight fell off to fifty-four pounds. She became scorbutic, lost her teeth, etc.

This case shows the extraordinary tolerance of this patient in regard to a great degree of inanition, and the existence of all the unfavorable conditions which the believers in forced feeding say are avoided by this process.

Dr. Siemens' investigations led him to give up forced feeding except in the rarest cases of injury or paralysis. Unwilling patients were fed with a spoon, but if they objected by closing the teeth, crying, etc., even this was given up. The means of giving food relied on consisted in keeping food constantly either where it could be given to the patient or he could get it himself.

A special department was fitted up in Dr. Siemens' asylum, with nurses day and night, and every wish or whim of the fasting patient was gratified at the earliest moment. After a long-continued fast the patient was put in bed. Little rooms were arranged where the patient could be alone with food. On the window-seats, or on little tables by the beds, food was placed. In cupboards tea and coffee were to be found, as well as raw and cooked eggs, fruit, wine, etc. With these very thorough arrangements, and the greatest care on the part of officers and nurses, Dr. Siemens allowed his patients to go for many days without food.

He details fifteen cases in which patients went for long periods of time without food. Case IV., for instance, of dementia paralytica, went once nine days, another time fourteen days, without food. Case VIII., of melancholia, abstained thirty-three days, with slight interruptions; loss of weight thirty-three pounds. Another time fourteen days, with thirteen pounds loss of flesh. Final result, complete recovery. Case IX., of mania, fasted absolutely for thirteen days; loss of weight fourteen pounds. Then took food regularly for twelve days. After this fasted for thirty days, taking water, however. Loss of weight the second time twenty-seven pounds. Final result, improvement.

Dr. Siemens ends his paper with twelve conclusions, some of which have been briefly indicated above. The fourth conclusion is especially interesting. This is as follows in substance: Voluntary abstinence, from purely psychical causes, is followed by no grave symptoms, either mental or physical, provided the period of abstinence does not exceed fourteen days without water, or fifty days with water, and the loss of weight does not exceed forty per cent.

[1] Zur Behandlung der Nahrungsverweigerung bei Irren, Archiv f. Psychiatrie und Nervenhulkunde, Band xv., Heft 1, s. 15.

— The chaplain of the Massachusetts Senate opened the session of the House the other day with a prayer for "pure air, pure water, and unadulterated food." The members will have a chance of showing their faith by their works, and at the same time of giving a striking illustration of the fulfillment of prayer.

— A case of poisoning of a New Jersey family recently occurred from the administration of "Rough on Rats" an arsenical preparation widely advertised, and carelessly handled by the public.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

SPECIAL MEETING.

FEBRUARY 27, 1884. Meeting called to order at eight o'clock, DR. ROBERT T. EDES, Chairman, presiding.

The CHAIRMAN announced that Dr. Morris, of Philadelphia, who was expected to present an essay, was detained by sickness and would not be at the meeting. Dr. H. O. Marcy, however, had received the paper from Dr. Morris, and would read it. The title of the essay was

THE MILK SUPPLY OF LARGE CITIES.[1]

The paper was attentively listened to, and on its conclusion an interesting discussion was opened by

DR. H. J. BARNES, who said: Personally my experience with the milk supply of Boston has provoked the greatest indignation. It begins as a producer on my father's farm sixteen or eighteen years ago, when we, in common with our neighbors, were in a continued state of irritation by what seemed unfair treatment by the contractors. The violation of agreement as to what they would pay for the milk of a stated season, the sending back of sour milk, usually with the cream taken off, the necessity of holding the milk ourselves when at certain seasons the contractors found they had engaged more than they could dispose of, were among the causes of trouble, which continue to the present time, judging from the expressions of views at the recent largely attended meeting of producers in Boston, and from the following letter just received from a milk producer: —

"The contractors hire the car, and although obliged to carry milk for private parties, yet they generally dictate terms, so it is almost impossible for producers to get at the consumers direct. Twenty-seven cents per can of eight and a half quarts, or three and three seventeenths cents per quart, is what my neighbors have had thus far this winter. This month one cent more per can, or three and one fourth cents per quart, while consumers, some of them at least, pay eight, and get extended "topped" milk at that. Producers are compelled to keep a part of their milk at home in order that these cormorants may supply to the good people of Boston milk watered and skimmed, with other abominations thrown in. Right glad would the producers be to send their milk direct to the consumers, if it were possible, but now it must go through the same old channel."

There is an inevitable variation in the supply and in the demand for milk. The farmers dispose of the milk to contractors who make a price for a certain time and agree to take all the milk the farmer produces. Often the quantity is much in excess of the demand and the contractor frequently breaks his bargain with the farmers, who then are obliged either to accept a smaller price for the milk or to make butter or cheese in order to utilize the surplus.

The laws of trade ought to regulate this matter, but if a farmer withdraws his dairy, and attempts to make butter he is met in competition by the manufacturers of oleomargarine, and it does not pay to make honest butter. One of the most objectionable features in our system of supply is the custom of holding the milk in Boston. In many instances milk produced in the morning is taken to the car in the evening, and transported to Boston during the night. The next forenoon it is delivered to the distributers, who take it to their barns or sheds, and there put it in the small service cans for delivery the next morning. It is then forty-eight hours old, sixty before the last meal of that day, and seventy-two hours old before a fresh supply is obtained. Except with the greatest care milk will not keep in good condition this length of time, and I am informed by men engaged in the business that it is common to use chemicals for the purpose of preserving it. The advantages of holding it this length of time accrue wholly to the milkman, for it gives time for "topping," so called, which means the rising of cream, rendering its easy separation from the milk possible, and how often this condition of the milk is taken advantage of we are informed by the analyses of the State Board. It had become a "recognized industry" among the milkmen. The milk should be delivered to the consumer on the day of its arrival in Boston.

As a consumer in Boston my experience has not been less exasperating. During the first few years of my practice I endeavored to employ cow's milk as a substitute for mother's milk, but always with indifferent success or failure, which necessitated its final abandonment. The paper of Dr. Lynde, read before the State Society, prompted me to try its use once more, and this time on my infant daughter. It soon provoked a diarrhœa, and after floundering about with the trial of a number of artificially prepared foods condensed milk agreed with her, and this was used until going into the country, where I obtained a supply of pure cow's milk, upon which she continued to thrive. Returning to Boston I engaged milk of a friend (?), who said he would give me pure milk, but the child soon showed the effects of the change in the quantity of water eliminated. It was impossible to keep her otherwise than in a constant state of irrigation, but not until a diarrhœa ensued, followed by intestinal catarrh, was the milk abandoned, and then only to be tried several times during the winter, again, each time, provoking disturbance of the digestive organs. Setting the milk for cream revealed the fact that it was regularly and systematically robbed of the cream. The following summer my child took cow's milk in the country, and did well. The next fall I made another change, after a long conversation with the new milkman, the substance of which was that I wanted "straight milk," as the life of my infant depended upon it. This he engaged to furnish, but, if possible, it was poorer than any I had ever before had. Although of the color of Jersey milk it had scarcely a trace of cream, and I went to the office of the city milk inspector to see what I could do about it. I was there informed that much of the complaint of adulterated milk was groundless, but if I wished to prosecute I should have the assistance of his office, but that "the department labored under great embarrassment for the want of a horse." I did not see fit to involve myself in litigation, and wrote to the milkman never to show himself on my premises again except to obtain a settlement of accounts, but up to this day he has never sent a bill. I then engaged milk which, I am happy to say, is of sat-

[1] See page 315 of this number of the JOURNAL.

isfactory quality, and my baby is doing exceedingly well with its use.

I trust and hope the influence of this Society will be exerted in support of the State Board in prosecuting these ungodly men, who by their wickedness compromise the health and lives of our little ones, an expression you will not think too severe when you remember that of the samples of milk analyzed by the Board in Boston ninety per cent. were found to be adulterated.

In regard to putting the milk in glass jars, I am informed by Mr. Burnett that after a trial of one year he found it impracticable. The breakage amounted to a loss of $150 per month in a supply of four hundred quarts a day. He now uses large steel cans holding sixty gallons, and is enabled by their use to deliver the milk to consumers but twenty-four hours old, and this is certainly an advantage and would be a great improvement in the system of distribution of railroad milk.

A gentleman doing business in the way of supplying milk to the consumers in Boston, and a member of the Milk Producers Association, who was present at the meeting by invitation of the Secretary, spoke as follows: —

This question naturally divides itself into three distinct parts, the production, the transportation, and the city delivery. Let us first look at the subject from the stand-point of the producer. He may be a wealthy man, perhaps living in or doing business in the city. He owns a farm for the fun of it, and because he must have a way of providing a summer residence for his family. He buys first-class stock, hires men to do the work, makes a large quantity of milk, which is very likely not to be of a superior quality for the reason that all means possible are taken to produce a large flow of milk, and from the lack of personal supervision of the men who do the work. This is the class of men who are agitating all kinds of innovations, putting fancy names on their farms, and a team in Boston to sell their supply, which they add to if necessary by purchases from neighboring farmers. It is possible for them to find ways of disposing of it to personal friends in the city, and others who are led by judicious advertising or the desire to see a new thing succeed. That these methods are not business like is proved by the fact that there is hardly one genuine success in the large number who have at various times attempted it; and no opposition is feared so little by the trade as that from a farmer who undertakes to sell his own supply.

Next we find a large class of farmers who are not rich men, who are farmers because they must be; they may own their farms and stock clear, and may have business talent enough to read the papers, buy their grain at the right time, and dispose of their products to the best advantage. Milk being by far the most desirable of these products they naturally make all other interests subservient to it. Such men have from eight to twenty cans per day, give their personal attention to it, take pride in their reputation, and are a reliable source of supply. As such, they are in great demand, not only among the contractors, but the milkmen themselves, who maintain a jealous watch lest some one more favored by the contractor shall get what they esteem to be their best dairies.

A very general impression has gained ground from misrepresentation and ignorance, that the farmer is the victim of an immense monopoly from which he has no escape. Nothing can be further from the truth. Imagine one man, as described, with eight or twenty cans of eight and a half quarts each to sell. He can hardly be so located within thirty miles of Boston that he cannot choose to which of two or three contractors he will sell his milk, to say nothing of butter makers and creameries. If he is so near the car that he can deliver it himself so much the better for him; if he is not, a team belonging to some contractor will either pass his house, if on a main road, or if not he can carry his milk out to the corner of the main road, where it will be taken up as the collector passes. He receives a certain price for his milk delivered at the car, and the rates vary from one to two, or in some cases two and a half, cents per can for the carting, the collector being able to do the work for the minimum rate because he goes loaded, few farmers preferring to hitch up and drive three or four miles for sixteen to forty cents. If for any reason one farmer desires to be independent of the contractor, he can, as many do, make butter, or if he does not wish to do that, he can come to Boston and find a milkman who wishes also to be independent, and they having traded, notify the contractor, who is compelled by law to freight the milk, the price being regulated by the Railroad Commissioners.

A third class of farmers are those who keep only one or two cows and make a small quantity of milk, who never become an important factor in the problem. All these various producers raise fruit, vegetables, grain, and hay, and expect, if they sell them, to be subject to the law of supply and demand, and to be able to receive only so much as is the ruling price on the day the sale is made; but when we look at the milk question we find a very different state of affairs. Our farmers appoint a meeting of a committee from their number who consult on the price to be established for six months from April 1st to October 1st, or from October 1st to April 1st, as the case may be. The stipulations are that the contractor shall take all the milk produced for six months at a price which he is expected to name in advance, and pay for the same by the 15th or 20th of the month succeeding the delivery. He, using his best judgment, establishes such a price, and agrees that it shall not be changed except with the consent of the above named committee. When all the facts are considered it is not to be wondered at that mistakes are sometimes made. Has he a remedy? Let us see. The summer of 1882 was very hot and dry in August and the first of September. The price was arranged on a basis of forty-three cents per can at the cars in Boston. From September 20th to October 20th it rained a little almost every day, the fall feed was a marvel, the cows gave more milk than in June, and seventy per cent. of the milk that came to Boston was enough to supply the entire demand. The farmers added all the new-milch cows to their herds that could be bought, sold all their calves, and literally flooded the market. January 1st, after three months of ruinous business, the price was lowered three cents per can, trade was stimulated somewhat, and the supply was not in such a tremendous excess of the demand; but the six months' business was a disastrous one, owing to the mistake. On the other hand if butter had been high and grain high, and the fall as dry as the fall of 1883, the farmers would have felt perfectly justified in selling their cows if they wished, or keeping the calves to use the milk, or making butter, and the last thing in the world that would have troubled them

would have been whether the people in Boston were supplied with milk or not. The short-sighted policy of the farmers in such respects, more than anything else, prevents the relations existing between them and their customers being as amicable as might be desired.

How to get cans enough to take all the milk he chooses to produce is the one great trouble every farmer has. The contractor tries to have every milkman furnish cans to take the milk from certain dairies, but has those of his own to send to supply any deficiency. These cans go up on the car dirty, and are left by the collector free of charge; are all of a size, eight and one half quarts wine measure. The farmer, having washed them, strains his milk into them, and puts them into the place he has arranged for cooling the milk. In many cases this is a covered tub or trough near the well or connected with running water from a spring. The contractor or milkman to whom he sells his milk frequently suggests and often helps to pay for this arrangement, which is of vital importance, as upon the care of the milk for twenty minutes after being drawn from the cow depends the value of it as an article of commerce.

How long milk may be preserved by good care and still be as good as fresh milk is a question upon which I would prefer the opinion of scientific men to my own. Certainly experience teaches that it is more desirable to most consumers (if they do not know of the fact) after twenty-four or even forty-eight hours. There is no trouble whatever in keeping it sweet three or four days, if a temperature of 50° F. is steadily maintained, but my experience also teaches that the baker must have as fresh milk as can be obtained if he wants to make a custard of it and get good results. A better cheese can be made from new milk than it is possible to make from that over twenty-four hours old.

The farmers, at their meetings and through the press, are frequently influenced by impractical men, who do not make milk, but who want to seem interested in their welfare, to do away with all middle men, and come directly in contact with the consumer. As before intimated, this has been done in isolated cases, but not yet successfully. Surely if practical men, of years of experience in the business, actuated by every feeling of rivalry and ambition, can see no way to improve the present plan, it is an indication that none can be found.

Let us now look at the second branch of our subject, transportation. Here enters upon the scene the much-berated milk contractor. This system has been the growth of years of experience, and many men have made financial shipwreck in the attempt to fill the position. With the plans and failures of the past we need have nothing to do, suffice it to say the only chance for any profit as it is now arranged is by saving a little here and a little there, by doing a large amount of work for a very small commission, and utilizing the surplus milk so as to make the smallest possible loss. The prices paid in the country as well as those obtained in the city are published, and the commission, about eight cents per can, or one cent per quart, is known to the farmer as well as to the milkman. The Railroad Commissioners, after thoroughly going over the matter, have allowed the contractor to charge six cents per can freight for milk brought thirty miles, which is a very close approximation to the actual cost. Out of this he has to pay freight to the railroad, buy ice to ice the milk in summer, and coal to heat the cars in winter, hire men to load the cars and deliver the milk upon its arrival in Boston, and guarantee it from accident or loss. If he buys and sells the milk he has two cents per can over the six for freight to protect him from loss in the transaction of his business and the surplus milk. As intimated before, he makes a one-sided contract by which he agrees with the farmer to take a large quantity if it is for the farmer's interest to make it, and to get along with a small quantity if the farmer thinks it is not in his interest to make it. On the other hand, he contracts with the milkman to give him just what he wants whether the farmers make it or not. In order to be safe he perforce buys all the milk on a large territory, preferring to manufacture a large surplus into butter to saying to his customers "I cannot supply you, and you must look elsewhere."

(To be concluded.)

THE NEW YORK ACADEMY OF MEDICINE.

LOCOMOTOR ATAXIA AND SYPHILIS.

At a stated meeting of the Academy held March 20th, Dr. Leonard Weber read a paper on the above subject. He commenced by saying that although the pathologist had not succeeded in establishing such a condition as syphilitic sclerosis of the posterior columns of the spinal cord, there had been collected a certain amount of clinical evidence that went to show an apparent connection between syphilis and locomotor ataxia. In a résumé of the history of the subject he spoke particularly of the publication of Fournier in 1876, which was mainly based on statistical data, and which recognized three forms of tabes: (1) the lumbar, which was exclusively spinal, (2) the cephalic, in which the cranial nerves as well as the cord were affected, and (3) the ophthalmic or amaurotic. After alluding to the opinions and researches of other authors, he quoted the remarkable paper of Erb, published in 1879, in which out of 100 cases of tabes reported it was claimed that no less than 61 occurred in syphilitics. When Erb presented his views at the International Medical Congress in London, in 1881, however, they were not received with much favor, and among those Dr. Weber mentioned as distinctly opposed to them were Moxon, Lancereau, Westphall, and Rosenthal. But still more recently Erb has published a second series of 100 cases in which no less than 91 per cent. were syphilitic, while in 1200 patients over the age of twenty-five suffering from nervous affections other than ataxia only 22½ showed a syphilitic history. His conclusion was, therefore, that tabetic patients were very frequently syphilitic, and it was altogether probable that tabes was a syphilitic disease. His opponents claimed, on the other hand, that there was no ætiological connection between the two affections, and that the prognosis was no better in those tabetics who had had syphilis than in those in whose cases there was no such history. After giving statistics from various writers Dr. Weber then referred to the paper of Dr. R. W. Birdsall, of New York, read at the meeting of the American Neurological Association in June, 1883, in which he reported a series of 42 cases of locomotor ataxia with a percentage of only 9½ of syphilitics. In comparing the statistics of different observers, he continued, one could not but be struck by the very

great discrepancy that existed in regard to the frequency with which tabes and syphilis were associated; but it was reasonable to suppose that it was not until quite recently that systematic attention had been given to the matter.

Having spoken of masturbation as a special predisposing cause of ataxia, he said that in all the cases of tabes that occurred in his practice he endeavored to exclude syphilis as a cause, as far as possible, by placing the patient for a time on specific treatment, and as the result of his experience it seemed to him that in certain instances there appeared to be some connection between syphilis and tabes, although it was not such a direct source of origin as rheumatic trouble. From a clinical stand-point there was a great difference between the symptoms in different cases, and great difficulty in ascertaining whether the diseased area was confined to the posterior columns or extended to neighboring parts, such as the lateral columns and the anterior cornua. In syphilitic tabes he believed that other parts were especially liable to be affected. The pathological and clinical manifestations of tabes were protean in character, and it was in the atypical cases that syphilis was most frequently found associated with or antecedent to it. As for the symptoms in general they were the same, as a rule, in syphilitic and non-syphilitic cases. In regard to the prognosis, this was relatively favorable when the syphilitic trouble was not of long duration, and when the symptoms were of irregular character and yielded to specific treatment.

It was a fact worthy of note that the results of antisyphilitic treatment had by no means fulfilled the anticipations formed by those disposed to accept the proposition that tabes was a syphilitic disease. The special treatment that Dr. Weber advised was a thorough course of inunction with mercurial ointment, as well as the use of iodide of potassium and baths. In all his cases of syphilis he had been more successful during the past ten years than during the ten years preceding, and he attributed this to the fact that ten years ago he had given up the internal administration of mercury, as a rule, and substituted inunction for it. While there might be occasional exceptional instances in which inunction would not be well borne, or could not be successfully carried out, he believed that all who would adopt this form of treatment would secure quicker, better, and more permanent cures than in any other way. In case of sudden and threatening outbreaks in old syphilitic patients there was nothing so immediately effective as large doses of iodide of potassium.

Out of 134 cases of syphilis in his practice the central nervous system was affected in 18, or 13½ per cent. In eight of the 18 the trouble was located exclusively in the brain, two of the patients being females and the other six males. In five (all men) it affected the brain and spinal cord both, and in five (one woman and four men) it was confined to the cord alone. Two of the first eight patients had died of cerebral syphilis. The other six were still alive, but not cured. Of the five in whom both the brain and cord were diseased, two had died and five were living, and of the last five one (the woman) had died of syphilitic hemiplegia. Dr. Weber then gave a brief outline of seventeen cases of locomotor ataxia which he had met with in his practice. Three of the seventeen patients had had syphilis, but in one case the syphilis was not contracted until several years after tabes commenced. In the two other cases it seemed to constitute an important ætiological factor. His conclusions were: —

(1.) That there was not sufficient evidence to show that syphilis was a direct cause of locomotor ataxia.

(2.) That there was plenty of proof that syphilis affected the cord, as well as the brain and meninges, and that it might be followed by tabes.

(3.) That such trouble occurred most frequently in those not efficiently treated.

(4.) That syphilitic lesions of the central nervous system were seldom, if ever, cured, and the necessity of early and long-continued treatment in all cases of syphilis was, therefore, apparent.

(5.) That the systematic use of inunction afforded the best means at our disposal for reducing the disease to early and harmless latency.

The discussion of the paper was opened by the President, DR. BARKER, who related three cases of paralytic and ataxic trouble, in only one of which there was a distinct history of syphilis, but in all of which marked benefit was derived from antisyphilitic treatment, though they were not apparently cases of true locomotor ataxia; and he said that he mentioned them simply to illustrate the point that light in regard to pathology was not infrequently furnished by the effect of therapeutic measures.

DR. AMIDON said that he desired to put himself on record as very much opposed to calling typical ataxia a syphilitic disease. This supposed connection between the two affections was based on purely statistical data, but Dr. Birdsall's carefully-recorded cases showed only 9.5 per cent. of syphilitic patients. The fact that the statistics of different authors, as given by Dr. Weber in his paper, varied to such a vast degree (the percentage of syphilitic cases ranging all the way from one to ninety-one per cent.) showed conclusively that statistical inferences were altogether worthless. In addition, the deduction that could be drawn from treatment showed that tabes was not a syphilitic disease. It might be true that a good many cases of apparent ataxia were relieved or cured by antisyphilitic treatment, but he was positive that not a single case of sclerosis of the posterior cords had ever been cured by such treatment. Dr. Amidon then spoke of the pathology of tertiary syphilis, illustrating the subject by a description of the localized and clearly defined cicatricial lesions resulting from the retrograde metamorphosis in gummatous deposits in the liver, and said that the characteristic lesions, affecting uniformly the whole tract of the posterior columns of the cord, were of an entirely different character. In conclusion, he said that the history of the entire course of the disease was against its syphilitic origin, for while its development was very slow and gradual the manifestations of tertiary syphilis appeared suddenly, and were characterized by great activity,

DR. R. W. TAYLOR said that he had already placed himself on record as in accordance with the views just expressed, and he was very glad to perceive the cautious manner in which Dr. Weber had handled the subject. The possible syphilitic origin of tabes had been first hinted at by Duchenne, as he was naturally struck by the fact that in a considerable proportion of cases of ataxia coming under his care he found that the patients had had syphilis. Antisyphilitic treatment proved of no service in these cases, however, and he came to the conclusion that there was in reality no

connection between the two diseases. Until Fournier's publication, therefore, the primary cause of ataxia was sought in sexual excess, alcoholism, gout, rheumatism, and exposure to cold; but when he reported that out of 30 cases no less than 24 were in syphilitic subjects, it began to be suspected that syphilis might be a very important factor in the causation of tabes. Having devoted some time to a consideration of Fournier's views, Dr. Taylor went on to say that in his last work that author had reported 94 syphilitic cases out of 103 tabetic patients. He also gave the statistics of a number of other writers (among them those of Rosenthal, one out of 65), and remarked that in these figures there was certainly sufficient disparity to throw doubt on any conclusions derived from them. In addition, he criticised the manner in which Erb and Fournier's cases were recorded, saying that it was painful to note the meagre and unsatisfactory data which they regarded as positive evidence of antecedent syphilis. As to the matter of pathology, he could only reiterate what he had said in the work in which he had acted as the collaborator of the late Professor Bumstead. Locomotor ataxia was known to be caused by sclerosis of the posterior columns, a lesion exactly limited to this portion of the cord, though often involving it to a considerable extent. The lesions of syphilis, on the contrary, were patchy and less diffused, and, moreover, always originated in investing structures, subsequently involving the cord itself. The same was true of cerebral syphilis, in which the lesions began in the meninges or bones and afterwards induced softening or induration of the brain. It was true that ataxic symptoms sometimes arose in the course of tertiary syphilis; but a careful study of the case would show that the trouble differed in many respects from true progressive locomotor ataxia.

Dr. Birdsall, having stated that he fully concurred in the conclusions of Dr. Weber in regard to locomotor ataxia and syphilis, said that the most of the cases which he had reported in his paper had been under his own personal observation. Out of 42 cases four were syphilitic, a percentage of 9.5, and he was surprised that this result differed so greatly from the statistics reported by Erb and some others. He then repeated the statistics given by various authors, and said that up to the present time, not including Erb's last hundred cases, there had been collected 525 cases, with an average of forty-three per cent. in syphilitics. This number, he thought, however, was entirely too small to base any definite conclusions upon. While, therefore, it would not do to ignore statistics altogether, any deductions derived from them in the present state of the question ought to be received with caution. In regard to Erb's remarkable figures, it might be explained that many of his so-called syphilitic cases would not be accepted as such by dualists, from the fact that he made no distinction whatever between chancre and chancroid, regarding the existence of either as conclusive evidence of syphilis; but if it was really found that there was a syphilitic history oftener in cases of ataxia than in other affections of the nervous system, the idea of a certain connection between the two diseases ought not to be rejected entirely. At the same time he was free to confess that up to the present no convincing proof of the existence of any such connection had as yet been presented. But while the lesions of syphilis in the nervous system were pretty well understood and generally recognized as distinctly different from those occurring in typical locomotor ataxia, the time might perhaps arrive when we should have to recognize syphilis, like sexual excesses, as one of the predisposing causes of ataxia.

Dr. E. L. Keyes thought that on account of the weight of authority supporting the figures the statistical element of the question could not be altogether disregarded. Personally, he did not believe that pure sclerosis of the posterior columns was caused directly by syphilis, but he could not see why it should be excluded altogether as a possible ætiological factor in tabetic trouble. Dr. Keyes had had one or two instances in his practice where ataxic symptoms had been distinctly relieved by antisyphilitic treatment. He used mercurial inunction and the iodide of potassium; commencing with the iodide, and pushing it to the limit of tolerance. In addition, baths were employed, in accordance with the Hot Springs method. While none of his cases had been cured, the benefit received had sometimes been so marked that he was fully convinced of the efficacy of specific treatment in certain cases with ataxic symptoms.

Dr. A. McLean Hamilton thought that the whole trouble in regard to the matter lay in the fact that two distinct forms of disease had been more or less confounded with each other, namely, classic sclerosis of the posterior columns of the cord and cerebro-spinal syphilis. In regard to the former he had found that not more than twelve per cent. of the subjects of it had ever had syphilis. In irregular ataxic cases there was a much larger percentage of syphilitics; and in these he had seen marked benefit derived from the use of iodide of potassium, given in the most heroic doses.

Dr. F. N. Otis said that it seemed to him that we could hardly afford to disregard the experience of such distinguished investigators as Erb and Fournier, however much we might ordinarily be disposed to distrust statistics. In their respective fields these men occupied the most exalted position, and their opportunities for observation and research had been unsurpassed in extent. Although his own personal experience on the subject was small, Dr. Otis said, his knowledge of syphilis in general led him to believe that the disease in question might, perhaps, be of syphilitic origin. As a disease of the connective tissue it acted apparently in the same way as syphilis when located in the testicle or liver, for instance. Having explained the pathological process in syphilis at some length he went on to say that the lines of cicatrization, which were characteristic of the late stages of the disease, were believed by the best authorities to follow closely the lymph distribution of the part or organ affected. When these cicatricial tissues were once formed there was very little hope left of accomplishing anything by way of treatment. He quoted from Erb to show that very little was yet known of the true character of the pathological process in locomotor ataxia, and stated that that recognized as taking place in syphilis would satisfactorily explain all the phenomena observed if it could be proved that the cord was supplied with lymphatic vessels. It was only a short time since the presence of these vessels had been demonstrated in the bones, and it was not improbable that ere long they would be shown to exist here also. The impossibility of removing cicatricial material by any therapeutical measures that had yet been discovered would also account satisfactorily for the fact that ataxia was not, as a rule, benefited by antisyphilitic treatment. That relief was afforded in a certain proportion of cases by specific

treatment, however, was shown by some instances which had occurred in his own practice. In three cases of ataxia marked benefit had been derived from it, and in two of these he had found by the relief which followed the division of a contracted meatus that all the urinary trouble experienced was not due to the tabes alone. In all ataxic cases, therefore, he thought it best to give the patient the benefit of the doubt, and institute a thorough course of antisyphilitic treatment before giving up the case as altogether hopeless.

DR. E. C. SPITZKA said that he thought the question had been looked at from too narrow a point of view, since an important set of facts had been ignored. In secondary syphilis the cerebro-spinal axis was sometimes affected, and it had been shown that in certain instances there was complete abolition of tendon reflex. Why, then, might not this also take place in tertiary syphilis? In his own cases two thirds of the patients had had syphilis, though in none of the only four cases occurring in females which he had had was there any such history. After referring to paralytic dementia as a disease, which, like locomotor ataxia, frequently occurred in syphilitics, he said, in conclusion, that ataxia was not strictly a systemic disease, since other portions of the cord besides the posterior columns were not infrequently affected.

Recent Literature.

The Pathology and Treatment of Venereal Diseases. By FREEMAN J. BUMSTEAD, M. D., LL. D., and ROBERT W. TAYLOR, A. M., M. D. Fifth edition. Revised and Rewritten, with many Additions, by DR. TAYLOR. With One Hundred and Thirty-nine Wood-cuts and Thirteen Chromo-Lithographic Figures. Philadelphia: Henry C. Lea's Son & Co. 1883.

Few American books on medicine have met with greater success than Bumstead's Venereal, and the present edition by Dr. Taylor, whose name was associated with the original author's in the fourth edition, shows conclusively, if such a showing were necessary, that the mantle has fallen upon no unworthy shoulders.

In his preface Dr. Taylor pays a tribute to the memory of his friend and colleague which deserves repetition in speaking of the book which remains as his proudest monument: "No nobler figure is to be found in medical literature. As a man he was broad, genial, and lovable; as an author he was erudite, clear, and concise; and as a physician in his department he was preëminent. As the French can point with pride to their still living Ricord, and the Germans to their deceased Sigmund, so we Americans can point to our Bumstead as the pioneer and master. His friends loved him, he was respected by every one who knew him, and all bowed the head in sorrow when he passed from among us."

The first edition of Bumstead's Venereal Diseases was published in 1861 "with many misgivings" on the part of the author. It met with unexpected success in our own country, and was translated into more than one foreign language. It was not the author's first appearance as a writer, as he had previously edited and translated Hunter's Venereal with Ricord's Notes. The second edition of the Venereal Diseases appeared in 1864, the third in 1870, and the fourth, with Dr. Taylor as coadjutor, in 1879. These various editions show in general the prevailing beliefs at the time of publication among syphilographers, and the series forms a history of the progress of syphilography during the past twenty years. As an instance of the beliefs that have figured largely only to disappear we need but refer to the chapter on syphilization, which, in the third edition, was even illustrated with a full-page outline figure showing the site and date of a very large number of inoculations. In the present edition the subject has shrunk to a scant two pages, and is regarded only as an interesting matter of history. The brain and nervous system, which were supposed to suffer but rarely from the ravages of syphilis at the time of the first edition, now occupy a position of great prominence in connection with the disease, and their consideration fills many pages.

The recommendation of the abortive treatment of gonorrhœa is retained in this edition, and, though guarded, it might quite as well have been omitted. With the abandonment of the belief in a single specific virus in gonorrhœa the principal logical argument for a belief in the efficacy of a substitutive medication is gone. The directions for its use allow it only in one case in a hundred, and never after acute symptoms or scalding have set in. It is not every one who can feel sure of a diagnosis between the slight mucous discharge of a bastard gonorrhœa and the beginning of the more severe form before the scalding appears. Logical as this treatment was to the believer in the specific contagium of gonorrhœa its actual working was unsatisfactory, and its use is condemned by the majority of recent authors, even those who retain a belief in the specific nature of the disease to be cured.

Slight additions have been made to the text which show the present state of belief in regard to the existence of syphilis in animals and micro-organisms as a cause of syphilis.

The growing size of the book has already rendered it somewhat ponderous as a text-book for beginners, for which the earlier editions were better qualified, and has made a place for smaller hand-books which avoid discussions on unsettled questions, and confine themselves to plain statements of facts and principles. At the same time certain things might be pointed out which are by no means fully treated, as the subject of syphilis and marriage, which has a slight mention in this last edition. But after all, after pointing out what one believes to be its sins of omission and commission, after saying that it is too large for a manual and too small for a complete treatise, it remains to repeat what has been said of it in almost every notice which has appeared from the first edition to the present time, that it is certainly the best single treatise on venereal in our own and probably the best in any language.

Bacteria and the Germ Theory of Disease. By DR. H. GRADLE. Chicago. 1883.

This little book contains a series of eight lectures delivered at the Chicago Medical College. There is nothing new or original in the compilation, and it merely adds another to the list of such works, already too long. Its value and the necessity for its publication must be entirely local.

— The students at Edinburgh numbered, last year, 3340. When its new buildings are completed it is claimed it will be the largest university in the world.

Medical and Surgical Journal.

THURSDAY, APRIL 3, 1884.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

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THE SANITARY CONDITION OF THE SCHOOL-HOUSES OF THE CITY OF LYNN.

We have before us a report of a special committee, of which Dr. J. G. Pinkham was the chairman, appointed to examine into the sanitary condition of the school-houses of Lynn. The city of Lynn being a place of 44,000 inhabitants, occupied largely in manufactures requiring a considerable degree of intelligence, and having, apart from this, every reason ourselves to believe that it is possessed of at least an equal public spirit and appreciation of the advantages of a public school education as other places of its class in the State of Massachusetts, the results of the committee's investigation should present more than a passing interest for parents and for those concerned with school hygiene, especially as one or two points seem to have been worked out by the committee in their report with more than ordinary care. Moreover, the Hygiene of Study, of which we spoke in our last issue, is a vain problem without hygienic surroundings.

We shall confine our comments to the two important particulars of lighting and ventilation, the defects in which, as shown by the Lynn schools, no doubt exist largely elsewhere in this State, and if in Massachusetts, where so much attention has been given to public schools, then probably in a still greater degree elsewhere.

In the matter of lighting the committtee adopt the usual minimum standard of authorities on this subject, which is, that the size of the windows collectively should equal at least one sixth of the floor space or sixteen per cent. Cohn, in Germany, requires a ratio of at least a fifth or twenty per cent.

In Lynn it was found in ninety-one school rooms that the ratio of window surface to floor space was too small, in some being as low as a twelfth, or eight per cent. only. Of the large grammar school buildings only one is reported as well lighted, the percentage of window to floor space being sixteen; in the other buildings this percentage ranges from ten to thirteen, and, we are told, the evil of insufficient light might easily have been avoided in the construction of these buildings had the architects (or builders?) been reasonably well informed in regard to the amount of light required in school rooms.

"Out of one hundred and twenty rooms visited, only three have light from the front; four have windows at the right only; four at the left only; twenty-eight at both sides, nineteen at the rear and both sides. The remaining rooms are lighted from the rear and one side. The middle rooms in two buildings, eight in number, have one window on each side near the back part, so that the light practically all comes from the rear, with reference to the greater number of pupils, — a very objectionable arrangement. In some school rooms with side windows the strongest light comes from obliquely in front of the pupils; as, for instance, in the building on Baltimore Street, where the light from the windows near the rear is cut off by trees. This difficulty could be obviated in a measure by reversing the arrangement of the desks.

"In many rooms the window sills are on a level with, or below, the eyes of the pupils seated.

"One building in particular is arranged on the worst possible plan. Both ends of the building are taken up by entries, shutting out light and air from the four rooms on every side except one. Sufficient light and air are clearly impossible under these conditions. The rooms on the north side, constituting one half the occupied part of the building, are absolutely sunless during school hours."

To the subject of ventilation especial attention was given by the committee, and the report shows a condition needing especial attention. As a standard of purity of air for respiratory purposes, that laid down by Dr. Parkes was adopted, namely, that air containing more than six parts of carbonic acid per 10,000 volumes (.06 per cent.) is unfit to breathe, and that with a ratio of eight, nine, or ten parts per 10,000 the air smells stuffy and close, and beyond this becomes foul and offensive. Accurate analyses of the air of a certain number of school rooms were made by Professor Hills, of the Harvard Medical School, and are given in the following table taken from this report, in which is included an analysis of air from out of doors, taken at the same time. It is fair to suppose that in all the instances given the carbonic acid had no other source than the respired air from human lungs, and therefore represented the measure of irrespirability of the atmosphere.

Place.	Day.	Hour.	Tem. of Room.	Outside Tem.	Carbonic Acid per 10,000 Vols.
Room 10, Whiting School	Nov. 28	11.25 A. M.	72° F.	40° F.	18.15
Primary No. 14, School Street	Nov. 28	11.35 A. M.	70° F.	40° F.	17.05
Primary No. 12, Baltimore Street	Nov. 28	11.50 A. M.	72° F.	40° F.	12.65
Primary No. 33, Chase Avenue	Dec. 3	3.45 P. M.	68° F.	25° F.	29.10
Master's Room, Shep. School	Dec. 3	4.00 P. M.	70° F.	25° F.	17.95
Primary No. 30, Elm Street	Dec. 5	10.28 A. M.	68° F.	41.5° F.	17.21
Primary No. 8, Parrott Street	Dec. 5	11.35 A. M.	68° F.	41° F.	15.17
Master's Room, Cob'et School	Dec. 6	11.30 A. M.	76° F.	41° F.	12.82
Out of Doors. Silsbee Street	Dec. 6	11.55 A. M.	–	41° F.	3.69

These analyses show the air in some of the rooms to be *very bad*, much worse in some instances than that of school rooms in Boston as exhibited in the second report of the Massachusetts Board of Health, and these analyses gave far from favorable results, as

may be seen by the following table giving a portion of the analyses taken from the report of the Board: —

AIR OF SCHOOL-ROOMS IN BOSTON.

Grammar Schools.	Date.	Hour.	Carbonic Acid per 10,000 Vols.
Myrtle Street	March 24, 1870.	10.25 A. M.	13.43
Dartmouth Street	March 25.	10.30 A. M.	12.91
Hawkins Street	March 29.	10.20 A. M.	9.74
Tremont Street	March 29.	3 P. M.	14.33
Waltham Street	March 29.	3.30 P. M.	12.11
Common Street	March 30.	10.05 A. M.	17.68
Blossom Street	April 5.	10.30 A. M.	19.03
Richmond Street	April 11.	10.10 A. M.	17.78
Primary Schools.			
Appleton Street	March 25.	3.15 P. M.	10.09
Hanover Street	March 28.	10.30 A. M.	14.29
Poplar Street	April 5.	11.15 A. M.	11.17
North Bennet Street	April 6.	10.25 A. M.	16.82
Richmond Street	April 11.	10.20 A. M.	8.10
Phillips Street	April 12.	10.20 A. M.	8.97

OTHER LOCALITIES FOR COMPARISON.

	Date.	Hour.	Carbonic Acid per 10,000 Vols.
Music Hall, Tremont Street	May 4.	4.05 P. M.	14.04
Tenement House, known as "Crystal Palace"	May 17.	2.30 P. M.	09.53
Hall of Y. M. C. U.	April 27.	9.05 P. M.	15.23
Municipal Court Room	April 20.	1.30 P. M.	12.04
Office Secretary of State	March 22.	2.45 P. M.	8.91
Printing Office	April 4.	3.30 P. M.	16.18
Selwyn's Theatre	April 11.	9 P. M.	14.43
St. Paul's Church	April 15.	11 A. M.	5.92
Public Library, Waiting Room	March 19.	2.30 P. M.	13.66
Public Library, Waiting Room	April 20.	7.50 P. M.	19.35
Out of Doors	May 17.	2.50 P. M.	3.97

The Lynn school rooms from which air was taken for analysis are said to be representative of the rest, and the reasons given for the condition found are that (1) the cubic air-space allowed to each scholar is too small, making good ventilation without draught difficult or impossible; (2) the means of ventilation employed are, as a rule, wholly inadequate for their purpose, and would be so, in most instances, even if there were much less crowding of the rooms.

The cubic air-space per scholar in the majority of the rooms is reported at less than 200 feet, in some being but little over 100 feet. The inadequacy of such a provision is readily shown by remembering that with the minimum air-space (220 cubic feet) allowed by authorities on hygiene the air would have to be changed seven times every hour to provide even 1500 cubic feet of fresh air per hour, or half the amount held to be necessary for adults. It is extremely difficult to effect the change of the air of a room as often as seven times in the hour without creating an objectionable draught. From one room, that of the Principal of one of the schools which was tested, air was found to be escaping from the outlets at a rate giving a change of not quite once in two hours, the Scylla of a draught having here been avoided for the Charybdis of impurity, or, as is more probable, very little thought having been given the subject.

Even the American brain is still subject to natural laws, and will not perform its functions, much less develop properly, in an impure or poisonous atmosphere, although the too common condition of school rooms and court rooms shows that such expectations are tacitly entertained of it. The Egyptian task-master was far less unreasonable in demanding from bondmen bricks without straw than are our own people in demanding from fellow-citizens and their own offspring sound and invigorating mental labor without a suitable supply of oxygen.

It is hoped by the reporting committee that the evils at Lynn are sufficiently plain to lead to the appointment of a supervisory committee. In these columns we have frequently had occasion to advocate the appointment of health supervisors or instructors in hygiene. We have no prejudices as to the title or composition of the office intrusted with hygienic supervision of schools in cities and large towns, but continue unaltered in the conviction — the expression of which has hitherto, it must be confessed, borne but little visible fruit — that such supervision should be provided and intrusted to special and qualified officers.

THE FOOT AND MOUTH DISEASE.

THE recent introduction of this distemper by means of an importation of some infected cattle into the country at Portland, Maine, its dissemination to a certain extent among neighboring native cattle, its supposed subsequent outbreak first in Kansas, then in Iowa and Illinois, seems to indicate that there exists at this time, among those whose duty it is to prevent just these occurrences, an amount of carelessness or ignorance entirely inexcusable, and which, if continued, will surely lead sooner or later to causes that will in their effects upon our public health and wealth be most disastrous and lasting. To show this let us, very shortly, review facts as reported from various sources.

During the summer of 1881 "under authority conferred by the sundry civil appropriations bill" the Secretary of the Treasury on July 16th appointed three persons upon a commission to be known as the "Treasury Cattle Commission." Of these three, the chairman was a veterinary surgeon, another had practiced as such for a long time, and the third was an editor of a live-stock journal. To this commission, after a time, it came to establish at several of our ports quarantine stations that they might *aid* the government in preventing the importation and spread of exotic contagious diseases of cattle, two of which, specific pleuro-pneumonia and epizootic aphtha, were well known to exist in Great Britain, from whence we were receiving numbers of animals.

The Board labored with this newly imposed duty, and among other results there was established at Portland a "cattle quarantine," to reach which, as we are informed, cattle landing from the steamers must be driven for a considerable distance over a public highway upon which it is possible for them to meet or be followed by other and native cattle without any restraint whatever; and to the actual occurrence of this chance is due the existence of foot and mouth disease among cattle about Portland. If the statements of competent eye-witnesses concerning the methods, or per-

haps it would be better to say the lack of methods, pursued within the "quarantine" are correctly reported, the negligence and stupidity of those in charge of it are almost beyond belief. One instance, as related to us by a person who witnessed the incident, will perhaps suffice to show this sufficiently for present purposes: —

Some imported cattle coming to the station a little time after the diseased cargo, were put by themselves in a barn at some little distance away from the sick ones. Upon a certain occasion it became necessary to have for a little time a few extra men in attendance upon them, and one of the members of the commission, who happened to be present, ordered that certain men who were then in attendance upon the diseased animals be called to come directly and give the required assistance. To this the owner promptly objected, referring the matter to his own veterinary surgeon, there present, who sustained the objection; the order was countermanded, and the blunder prevented.

When it is understood, as it is among all properly qualified men, that the contagious principle of foot and mouth disease is surely and easily conveyed by media, as of clothing, ropes, pails, litter, and the like, one is forced to the conclusion that this unqualified member of the commission had better be superseded by a capable man, or else that the government holds itself fairly open to the criticism of keeping an establishment for the propagation of contagious diseases among cattle. Is it that even this service must be so strangely mixed up with politics and political expediency in this country that nothing but a *show* of action in this direction is tolerated by the authorities at Washington? Or is it, perhaps, that properly qualified men are so few among us that their services for this work cannot be obtained. Let us look at another phase of this same matter.

During the month just passed we were informed by the daily papers, which had received the news by telegraph, that foot and mouth disease was reported by "the United States veterinary surgeon at Fort Leavenworth," who had been detailed to investigate the matter as existing in a certain part of Kansas. In the dispatch there followed such a description of the nature of the outbreak as to lead any one with a knowledge of matters of the sort to decide at once that whatever the disease was it was *not* "foot and mouth."

Rapidly following this outbreaks were reported from at least two other States. Much excitement was worked up, and a large appropriation was obtained to "stamp out" what we were told, a little while after, by another governmental veterinary surgeon, if he is correctly reported, was "ergot in the hay." In view of the rather farcical ending of the whole matter we can this time — if we do not belong to the veterinary profession — afford to smile, but still the more thinking mind will ask itself what the meaning of all this is. In the first place the government has employed an unqualified man; in the second, one who is a graduate of a school in which the total time demanded for professional study is something less than ten months. Perhaps we need look no further. If it is true that the "principles and practice" of veterinary medicine are to be "picked up," or even that the science is to be sufficiently mastered by about nine months of special study, what cause of wonder is there that these mistakes occur, for it cannot be a science of any depth or stability. On the other hand, if it is true that there is a real science of the sort, which can, by being allowed to exercise its proper function, be made to do service in protecting public health and domestic industry, then why is it that a government, which should foster the interests of the people, is so unfortunately advised in this matter?

The general public is beginning to realize how important a bearing the diseases of domestic animals and their control by proper measures resulting from their intelligent study is destined to exert upon the material prosperity of the country. People do not yet appreciate, however, the intimate connection which a more exact ætiology and pathology have shown to exist between many of the diseases of domestic animals and of men. This very foot and mouth disease which has of late been occupying so much attention is an excellent illustration of such connection. An extensive epidemic of aphthous sore throat at Dover, England, having its origin in a dairy supplied with milk from infected cattle, is at this very time under investigation by the medical health officer of the district. That man is liable to contract the disease has been sufficiently proved before.

We do not know how many epidemics, among animals and human beings, nor how much loss must take place before the needed lessons are taken to heart, but fear that the process will be expensive if not slow.

MEDICAL NOTES.

— Dr. D. Humphreys Storer, of Boston, celebrated his eightieth birthday last week, when "honor, love, obedience, troops of friends," found themselves appropriately and happily sheltered beneath his roof.

— The Legislature of Connecticut, in session at Hartford, passed a bill recently prohibiting the sale, for hotel or family use, of any ice cut from waters made impure by sewage, mill refuse, etc. There was no objection in the bill to the use of such ice by market men or others for preserving articles. After a very short debate a member rose with an amendment that the bill should not go into effect until next November. He frankly stated that one of his constituents had a lot of impure ice, and as he had expended his money in cutting and housing it it was only fair that he should be permitted to sell it wherever he could. In spite of the whimsical character of this objection the House, to the surprise of everybody, agreed to the amendment. The Senate promptly concurred, but within the next few days so many indignant protests were received that the Senate, last week, recalled the bill, and struck out the obnoxious amendment.

— M. Jaccoud, in an analysis of a large number of temperature charts in typhoid fever (*Journal de Médecine*, February, 1884), shows that the general impression as to the average date of the attainment of the

maximum temperature in that disease is not correct. Not the sixth to eighth day, but the fifth represented the maximum; in fact it was not very rare for the maximum to be reached on the second day. In the light of these observations it evidently is unsafe to exclude typhoid on the score of having a temperature of 104° F. on the second or third day. The examination of these charts showed that precocity of the fever constituted a rather unfavorable element of prognosis.

— At the "Health Exhibition" to be held in South Kensington, England, in May next, food, dress, the dwelling, and the workshop are to form the staple attractions. The exhibition of food will, we learn from the *Lancet*, be international, and will embrace raw food substances from all parts of the world, and the different methods of preparing food which are in vogue in different countries will be fully illustrated. The storing, conveying, and preserving of food, as well as its adulteration, and the diseases produced by unwholesome food, will all form the subject of exhibits. Educational machinery and the hygiene of the school-room will also form subjects for illustration. Surgeons J. S. Billings and J. S. Brown, United States Army, have been detailed to attend this exhibition. They will also represent the United States Army Medical Corps at the International Medical Congress, which will convene at Copenhagen in August next.

— The question has been raised as to the frequency of epilepsy in the colored race, by the following remark of Dr. Lawson Tait in a discussion as to deafness in white cats (*Nature*, xxix., 164): "Every kind of white animal I have kept as a pet has proved to be the subject of epilepsy; and the association is suggestive, when we are told, as I have been frequently, that the disease is unknown among negroes." In *Science*, February 29, 1884, Alexander Graham Bell, in a communication, denies this assumption regarding the colored race, at least in America. Another writer, in the same periodical, claims that epilepsy is more frequent in negroes than among whites, which claim is apparently borne out by the following table furnished Mr. Bell by General Seaton from the unpublished figures from the tenth census: —

Percentage of epileptics in the United States, 1880, *by race and sex.*

White male	.004749
White female	.003751
Black male	.005011
Black female	.004267
Indian male	.002942
Indian female	.003084
Chinese male	—
Chinese female	.020925

NEW YORK.

— The annual commencement of the New York College of Pharmacy was held at Steinway Hall on the 17th of March. The graduating class numbered seventy-one, and among them there were two young women.

— The projectors of the new cancer hospital have published a letter from the late Dr. Sims in regard to the matter, written a few weeks before his death, in the course of which he says: "A cancer hospital is one of the great needs of the day, and it must be built. We want a cancer hospital on its own foundation, wholly independent of all other hospitals. . . . Its medical board ought to be men who go into it with zeal, determined not only to give temporary relief to human suffering, but to do something toward discovering better methods of treatment. We are now making great progress in every department of medicine. Why should not cancer derive some benefit from this general onward movement? Doubtful points of practice can only be settled in the wards of a great hospital, and success in treatment can only here be demonstrated. We want a medical board of large and liberal views. I would take knowledge wherever it can be found. I would invite any man who claimed to have a specific to come and try his remedies under the supervision of a committee specially appointed for that purpose. I would offer a large premium for any improvement, whether in constitutional or local treatment. I would do everything to obtain practical knowledge on this subject, regardless of the source from which it emanated. . . . Let me beg you to take steps at once to inaugurate a movement which must culminate in a great work so much needed here and now. The subject of cancer is too large and its interests too great to be lodged in a pavilion subsidiary to any other hospital, whether special or general."

Correspondence.

ARTIFICIAL INFLATION OF THE COLON WITH GAS.

BOSTON, *March* 20, 1884.

MR. EDITOR, — In regard to the artificial inflation of the colon with gas, as recommended by Professor von Ziemssen, and mentioned in No. 12 of the JOURNAL, it may not be wholly useless to quote the statement of Austin Flint in his Practice of Medicine,[1] who, in treating of Intussusception, says: "I have known rupture to result from the injection successively of an acid and alkaline liquid, giving rise to the evolution of gas by combination within the intestine." It is also on record that injections of water, given to relieve intussusception, have ruptured a portion of normal intestine, below the displaced part, so that it seems clear that, in clinical experiments, we should keep very far on the safe side of an "enormous degree of inflation" or even "extreme expansion" of the colon. Respectfully yours,

HERMAN F. VICKERY, M. D.

Dr. Flint gives no particulars as to the condition of the intestine to which he refers, nor do his words indicate whether the accident occurred within the writer's personal knowledge or was merely reported to have happened. On the other hand, V. Ziemssen's language is very explicit, especially in regard to the experiments on intestines immediately after death. We should think by following the suggestion as to introducing the acid and alkali in divided portions any danger of rupture would be easily avoided. Water, from its weight, is probably more dangerous than gas. — REP.

[1] Fifth edition, 1881, page 490.

Miscellany.

A CONTRIBUTION TO THE SURGERY OF THE BRAIN.

A PATIENT was recently exhibited by Dr. Macewen before the Pathological and Clinical Society of Glasgow,[1] whose brain had been operated on for the relief of left hemiplegia, and who has recovered the power of movement to such an extent as to enable her to walk freely about, though with a paraplegic gait, to raise her arm to the level of her shoulder, and to grasp with considerable power, though there is a deficiency in co-ordination of movement of the hand.

She had a syphilitic history. The hemiplegia was preceded by a tingling sensation and a numbness of the left arm and leg, which increased until it ended (within six weeks from its commencement) in complete motor paralysis and a deficiency in the perception of touch. The left side of the face was also slightly affected. This was accompanied by mental confusion and loss of memory. Full antisyphilitic treatment had been tried along with counter-irritation to the head, previous to her coming into the Royal Infirmary, and while she was in the medical wards of that institution. These did not seem to have relieved in the slightest the condition spoken of above.

Trephining was performed over the middle of the ascending frontal and parietal convolutions. The internal table of the disk removed was found softened and thicker than usual, having on its internal surface a series of projections or roughnesses, some protruding for nearly one eighth inch beyond the general level. A second opening was made over the occipital region, and a similar thickening of the internal table was found. Opposite to the first opening the dura mater was paler than normal, and somewhat thickened. It was elevated, and a false membrane of yellow color, and about one sixteenth of an inch in thickness, was removed. An incision was made into the brain in the direction of the paracentral lobule, when a gush of grumous red-colored fluid escaped out of the opening. Its quantity was not measured, as it could not have been collected. Approximately, there would be about a couple of drachms. The brain pulsations previously were not discernible, but, after the escape of this collection of fluid, it was thought that very feeble pulsations were seen. Some of the surgeons standing by doubted the presence of the cerebral pulsation. The disks of bone were carefully divided into segments and replanted, and are now quite firm. Wounds treated without pus production.

The day after the operation the patient expressed herself as very much better. On the third day she moved her toes. Within a week she lifted her leg from the bed and stated that she was so much better that she could turn in bed, and believed she could walk. The fingers were moved within a week. Her mind greatly changed for the better, her memory improving, and her intelligence becoming much brighter. She can now walk freely about, and does a considerable amount of domestic duty in the ward. She lifts her arm to the level of her shoulders, and can grasp with considerable force.

In the discussion which ensued upon the exhibition of the patient the improvement was attributed to the result of the operation by surgeons who had seen the patient before it was performed. Regarding the division of the disk of bone before its replacement, it was held by one speaker that it was a decided advantage to divide the disk of bone into parts, and he was of opinion that it would be a still greater if the centre of the disk were perforated before dividing it, so as to admit of the insertion of a small drainage tube. Granulation tissue was apt to block up the spaces between the particles of bone and prevent free drainage. Dr. Macewen in closing the discussion said that on two occasions he had introduced the disk of bone entire: one did well; a small portion of the other necrosed, and the whole had is consequence to be elevated. The advantage of having the bone in small pieces was that you could, under these circumstances, easily remove the affected portion and leave the remainder.

[1] Glasgow Medical Journal, February, 1884.

THE SURGICAL ABUSE OF SPONGES AND OF SILVER WIRE.

UNDER the somewhat sensational title of "Seven Surgical Follies," Dr. John B. Roberts (*Polyclinic*, February 15th) considers what he calls the ether folly (the abandonment of ether for chloroform on account of lack of knowledge of how to secure anæsthesia by the former), the incision folly (too short incision), the styptic folly (use of styptics to control hæmorrhage), the adhesive plaster folly (plaster in the place of sutures), the dose folly (inadequately small doses), the sponge folly, and the suture folly. On these last two points he says: —

"What I term the sponge folly is the habit of employing sponges for absorbing blood from wounds, when napkins or towels are always obtainable, and are far less liable to introduce septic material into the wound. Sponges, while too expensive to be thrown away after each operation, are cleaned with great difficulty. Servants and nurses, therefore, not appreciating the importance of thorough cleansing and disinfection, often neglect this duty. Hence I prefer towels, and if I do an operation at a patient's house, always use clean towels obtained there. Thus I secure an almost certain immunity from purulent or septic dirt in the articles used for absorbing blood. Perfectly clean surgical sponges are the exception, but clean household towels are the rule. At the polyclinic I use for this purpose, to a considerable extent, Japanese paper napkins, which are thrown away after being once used. Absorbent cotton is too expensive for such uses, except to a limited extent, and besides, has a tendency to leave filaments entangled in the wound."[1]

Regarding the "suture folly," the author says: —

"I do not refer to the erroneous opinion, long held, that sutures should not be used in the scalp. This tradition has been disproved so often that few surgeons would now hesitate to use sutures as freely in the scalp as elsewhere. What I call the suture folly is the ad-

[1] We learn by a note in another part of the same journal that these Japanese napkins are found by Dr. Roberts as efficacious and clean as cotton ones, and are so cheap that they can be thrown away after being used. They cost from $6 to $7.50 a thousand. The cost of washing a large number of ordinary towels is thus avoided. The paper towels are scarcely suitable for drying hands after washing, unless several towels are used at once, because the large amount of moisture on the hands soon saturates a single towel. For removing blood from wounds, a paper towel is crumpled up into a sort of ball and then used as a sponge. Such balls absorb blood rapidly. The crude ornamental pictures, in color, on the towels, are of no advantage, nor are they, as far as is known, any objection.

herence of many to the theory that silver wire only should be employed for suturing purposes. Nothing could be more fallacious. Do we use silver hare-lip or acupressure pins? Why, then, employ silver sutures, when iron wire is stronger and far cheaper? When large and gaping wounds require the sutures to stand much tension, silver wire, if used, must be very thick. Iron wire of much smaller diameter, and therefore much more flexible, gives an equally strong suture, and in addition to being better adapted to the purpose is much cheaper. I recollect that, in hospital practice, nearly eight years ago, I discarded silver wire, which cost one dollar for each small coil, and bought, at a hardware store, enough iron wire for ten or fifteen cents, to last many months. The nicest iron wire I have seen, and which I now use for the purpose, because it is strong, very flexible, and free from elasticity, can be bought for five cents a spool. If it becomes a little rusty, it can be rubbed clean in a moment, should the operator object to the small amount of oxide of iron upon it."

NEW FACTS ABOUT DR. O. W. HOLMES.

THE following amusing instance of English insularism was handed us by a friend who chanced to consult a paper on Oliver Wendell Holmes, his Writings and Philosophy, by Robert F. Green, which occupies thirty-two pages of the thirty-fifth number of the Proceedings of the Literary and Philosophical Society of Liverpool for 1881. Among other "facts" about Dr. Holmes the writer gives these: "Besides the Professorship at Dartmoor, he founded and carried on a medical school at Tremont and had a large private practice."

It must be confessed that this is no more singular than the biography of Tennyson we recently saw in an Indiana newspaper headed by a cut of Longfellow.

THE BERLIN POLICLINIC.

THE Berlin Policlinic, 3 Fiegelstrasse, celebrated last November its first anniversary day. During this time more than two hundred medical men, amongst them many strangers, have attended it.

Specialties are taught in monthly courses which begin every first working day of the month and last every day during the whole month except Sunday and holidays.

To the Berlin Policlinic two laboratories, one for chemistry and one for histology, are attached. In both medical men find ample opportunity for executing researches on scientifical objects. The first of January a third laboratory, destined for working in Bacterioscopy, will be opened. At the same time a monthly course of Bacterioscopy will join the other courses.

RELATIVE COST AS LEGAL STANDARDS, OF UNITED STATES PHARMACOPŒIA AND DISPENSATORY.

IT is to be presumed that those who wish to have the United States Dispensatory, a commentary upon the Pharmacopœia, substituted for the Pharmacopœia itself as the legal standard for drugs in this State, at the least wish it to be always the latest edition of their favorite authority. As it is now the fifteenth edition of the Dispensatory which comments upon the sixth revision of the Pharmacopœia, if they wish to keep up with their standard they must buy a copy of that work twice and a half as often as they would of the Pharmacopœia, the present standard, and as the retail price of the Pharmacopœia is $4, while the Dispensatory is $8 — twice as much — it would cost them, even at the present rates, just five times as much to enjoy their desired uncertain standard. But as the publication of the Pharmacopœia began thirteen years before its commentary, the Dispensatory, and the price of the former edition of the Pharmacopœia was only about $1.50, while that of the Dispensatory has always been about as much as now, it would, with the former editions of these works, have cost really much more than this.

ELECTRIZATION OF THE SYMPATHETIC AND PNEUMOGASTRIC NERVES, WITH SIMULTANEOUS BILATERAL COMPRESSION OF THE CAROTIDS.

DR. J. LEONARD CORNING, of New York, writes in the *New York Medical Journal* (February 23d) advocating a method of electrization which he believes to possess a substantial value.

Advantage is taken of the fact that at a point situated between the angle of the lower jaw and the hyoid bone, on the one hand, and between the internal border of the sterno-cleido-mastoid muscle and the continuation of the tracheal line on the other, one may embrace by one electrode three important structures at once, namely: (1) the internal carotid; (2) the pneumogastric nerve; (3) the sympathetic nerve. Besides these important structures, we have the jugular veins, adjacent subsidiary nerve-stems, etc. Taking into account the physiological functions of the three principal structures named, it will be seen that galvanization exerts a threefold action on the encephalon, due to (1) diminution of the amount and pressure of the cortical blood-stream; (2) contraction of the cerebral capillaries; and (3) retardation of the heart's action (*when currents of considerable strength are employed*).

The apparatus consists essentially of a bifurcated conducting rod admitting of the application of an electrode on the two sides of the neck simultaneously, with provisions for adjusting accurately the current through each pole. Of course, precautions are laid down in view of the importance of the structures acted upon. The amount of compression of the vessels as well as the strength of the current must be carefully watched. Dizziness and syncope must never be allowed to be produced.

Therapeutically the author reports admirable results in congestive headaches, which may be cured in a few minutes. He also has hopes (the experience being not yet sufficiently extended to prove their success) of its value in epilepsy and incipient general paralysis. The galvanic current is generally preferable to the faradic.

Besides the more obvious physiological effects already referred to, the author notes the following phenomena in connection with the procedure described: (1.) Dilatation of the pupil. (2.) Drowsiness. (3.) Dizziness (where too great pressure or excessively strong currents are employed). (4.) Drooping of the eyelids. (5.) Retardation of the heart's action (where strong

currents are used. (6.) Pallor about the lips and upper portion of the face. (7.) Muscular weakness, as proved by the dynamometer; the subject, if standing, complains of weakness in the knees. (8.) If the compression and strength of the current be great, syncope may be produced. (9.) Diminution of the temperature over the parietal bones. Lombard's thermo-electric differential calorimeter shows a very considerable difference between the peripheral temperature and that of the head. (10.) Very interesting is the observation that the primary stage of excitement incident to etherization is cut short by resort to this method, and the amount of the anæsthetic required proportionately reduced.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 22, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	672	—	15.30	18.30	2.55	3.90	3.60
Philadelphia	927,995	376	141	23.76	15.93	1.35	7.56	3.24
Brooklyn	644,526	252	104	16.00	16.20	4.80	4.40	2.40
Chicago	632,100	204	86	20.58	11.76	.98	6.86	3.92
Boston	423,800	198	61	16.32	14.28	6.12	6.12	2.55
Baltimore	408,520	157	61	18.56	17.92	1.28	5.12	2.54
St. Louis	400,000	143	44	12.60	9.80	.70	4.20	1.40
Cincinnati	272,400	102	31	7.84	20.58	.98	1.96	—
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	102	33	18.62	17.64	1.96	2.94	10.78
Pittsburg	180,000	61	25	11.12	11.12	—	3.28	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	17	7	—	23.52	—	—	—
Nashville	54,400	17	7	11.76	41.16	—	—	—
Charleston	52,286	25	6	4.00	20.00	4.00	—	—
Lowell	71,447	28	14	14.28	10.71	3.57	7.14	—
Worcester	69,442	18	11	—	16.66	—	—	—
Fall River	62,674	16	6	12.50	12.50	—	6.25	—
Cambridge	60,995	25	6	12.00	16.00	—	8.00	—
Lawrence	45,516	21	5	23.80	14.28	—	4.76	—
Lynn	44,895	20	2	—	12.00	—	—	—
Springfield	38,090	12	3	16.66	8.33	8.33	8.33	—
Somerville	31,350	6	3	—	33.33	—	—	—
Holyoke	30,515	10	5	40.00	—	10.00	—	—
New Bedford	30,144	16	4	6.25	12.50	6.25	—	—
Salem	29,503	13	4	23.07	38.45	7.69	—	—
Chelsea	24,347	8	2	12.50	25.00	12.50	—	—
Taunton	22,693	6	3	16.66	—	—	16.66	—
Gloucester	21,400	6	0	—	16.66	—	—	—
Haverhill	20,905	5	1	—	20.00	—	—	—
Newton	19,421	6	0	—	33.33	—	—	—
Brockton	18,323	3	0	—	33.33	—	—	—
Malden	15,273	2	0	—	—	—	—	—
Newburyport	13,947	6	2	—	16.66	—	—	—
Fitchburg	13,433	3	3	66.66	—	—	—	—
Eighty Massachusetts towns	347,988	75	13	14.66	17.29	—	5.32	—

Deaths reported 2641 (no reports from New Orleans, Buffalo, and Milwaukee): under five years of age, 694: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 434, consumption 425, lung diseases 406, diphtheria and croup 125, scarlet fever 98, diarrhœal diseases 54, typhoid fever 43, measles 20, whooping-cough 20, puerperal fever 19, erysipelas 18, cerebro-spinal meningitis 17, typhus fever six, small-pox three. From *typhoid fever*, Philadelphia 14, Chicago five, New York, Brooklyn, Baltimore, and Lawrence three each, Boston, Cincinnati, Pittsburg, and Holyoke two each, St. Louis, District of Columbia, Fall River, and Salem one each. From *measles*, New York eight, Baltimore six, Philadelphia and Brooklyn two each, District of Columbia and Pittsburg one each. From *whooping-cough*, New York four, Pittsburg three, Philadelphia, Boston, Baltimore, Cincinnati, and Fitchburg two each, Brooklyn, District of Columbia, and Cambridge one each. From *puerperal fever*, Chicago seven, St. Louis three, New York two, Philadelphia, Boston, Baltimore, Cincinnati, Nashville, Salem, and Northbridge one each. From *erysipelas* New York 10, Chicago three, Baltimore and St. Louis two each, Philadelphia one. From *cerebro-spinal meningitis*, New York six, Chicago, St. Louis, Lowell, Lawrence, Holyoke, Quincy, Woburn, Amherst, Holliston, Nantucket, and Natick one each. From *malarial fevers*, New York five, Brooklyn and St. Louis two each, Philadelphia and Baltimore one each. From *typhus fever*, New York and Brooklyn three each. From *small-pox*, Philadelphia two, Nashville one.

Five cases of small-pox were reported in St. Louis, Cincinnati one; scarlet fever 35, diphtheria 13, and typhoid fever 11 in Boston.

In 101 cities and towns of Massachusetts, with an estimated population of 1,428,666 (estimated population of the State 1,955,104), the total death-rate for the week was 18.21 against 17.07 and 20.31 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending March 8th, the death-rate was 22.5. Deaths reported 3773: acute diseases of the respiratory organs (London) 384, whooping-cough 138, measles 109, scarlet fever 94, fever 44, diphtheria 25, diarrhœa 25, small-pox (Sunderland seven, Birmingham four, Liverpool two, London and Wolverhampton one each) 15. The death-rates ranged from 13.8 in Birkenhead to 35.1 in Preston; Birmingham 19.6; Bradford 20.2; London 21.3; Leeds

21.7; Leicester 22; Sheffield 24.5; Liverpool 25.6; Nottingham 26.2; Blackburn 26.9; Sunderland 28.4; Manchester 29.3. In Edinburgh 20.3; Glasgow 27.5; Dublin 26.

For the week ending March 8th, in the Swiss towns, there were 49 deaths from consumption, lung diseases 22, diarrhœal diseases 25, diphtheria and croup 12, whooping-cough 12, typhoid fever five, erysipelas two, puerperal fever two. The death-rates were, at Geneva 35.7; Zurich 11.8; Basle 13.9; Berne 33.3.

The meteorological record for the week ending March 22d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 16	30.234	32	40	26	77	41	68	62	NW	NW	W	7	21	8	O	C	C	—	—
Mon., 17	30.158	38	46	26	66	49	82	66	SW	SW	W	5	17	12	C	O	C	—	—
Tues., 18	30.317	36	42	32	60	48	60	56	NW	NW	NW	20	13	4	C	C	C	—	—
Wed., 19	30.190	36	41	28	68	52	100	73	NE	SE	E	1	11	28	O	O	R	—	—
Thurs., 20	29.819	36	39	32	100	100	89	96	NE	N	NW	16	17	8	R	S	O	—	—
Fri., 21	30.296	37	43	34	62	77	93	77	NE	E	S	8	9	2	O	O	C	—	—
Sat., 22	30.240	44	57	31	72	46	77	65	W	W	NW	8	10	5	C	C	C	—	—
Mean, the Week.	30.179	37	44	29				71										36.05	1.91

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MARCH 22, 1884, TO MARCH 28, 1884.

HAMMOND, JOHN F., colonel, and surgeon. Now in New York City, on sick leave of absence, will, after the expiration of his sick leave, await orders in that city. Paragraph 8, S. O. 70, A. G. O., March 26, 1884.

GIBSON, R. J., first lieutenant and assistant surgeon. Relieved from duty at Fort Hays, Kans., and ordered to Fort Wingate, N. M., for duty. Paragraph 3, S. O. 58, headquarters Department of the Missouri, March 18, 1884.

CROSBY, WILLIAM D., first lieutenant and assistant surgeon. Relieved from duty at Fort Huachuca, A. T., and ordered to Fort McDowell, A. T., for duty. Paragraph 1, S. O. 20, headquarters Department of Arizona, March 15, 1884.

EDIE, GUY L., first lieutenant and assistant surgeon. Assigned to duty at Fort McIntosh, Texas.

ROBERTSON, REUBEN L., first lieutenant and assistant surgeon. Assigned to duty at Fort Ringgold, Texas.

S. O. 33, paragraphs 3 and 4, headquarters Department of Texas, March 17, 1884.

GANDY, CHARLES M., first lieutenant and assistant surgeon. Assigned to duty at Fort Brady, Mich., as post surgeon. Paragraph 6, S. O. 56, headquarters Department of the East, March 22, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MARCH 29, 1884.

GREEN, E. H., passed assistant surgeon, to the Greely relief steamer Thetis.

MARSTELLER, E. H., passed assistant surgeon, to the receiving ship Colorado, New York.

BRYAN, I. H., passed assistant surgeon, resigned, to take effect April 10, 1885, with leave of absence till that time, and permission to leave the United States.

RUSH, C. W., passed assistant surgeon, to the Naval Academy.

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting of the Society — a quarterly meeting for informal discussion — will be held at the Medical Library Rooms, second Thursday of April, at four o'clock P. M. It is especially desired that all members should be present. Lunch served at this session.

HENRY M. FIELD, M. D., *Secretary.*

SUFFOLK DISTRICT MEDICAL SOCIETY. SPECIAL MEETING. — A special meeting of the Suffolk District Medical Society will be held at 19 Boylston Place on Wednesday, April 9th, at 7.45 o'clock, to appoint delegates to the meeting of the American Medical Association. By order of the President.

H. C. HAVEN, *Secretary.*

The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, April 9th, at eight o'clock. Dr. F. I. Knight will present a paper upon The Laryngeal Complications of Pulmonary Phthisis. Drs. S. W. Langmaid, E. W. Cushing, and F. H. Hooper will open the discussion. Dr. G. L. Walton will read a paper entitled Hysteria as affected by Removal of the Ovaries. Dr. John Homans will open the discussion.

ALBERT N. BLODGETT, M. D., *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — History of the Discovery of the Circulation of the Blood. By Henry C. Chapman, M. D. Philadelphia: P. Blakiston, Son & Co. 1884.

The Cinchona Barks Pharmacognostically Considered. By Friedrich A. Flückiger, Ph. D. Translated from the Original Text, with some Additional Notes, by Frederick B. Power, Ph. D. With eight Lithographic Plates and one Wood-Cut. Philadelphia: P. Blakiston, Son & Co. 1884.

Illustrations of the Influence of the Mind upon the Body in Health and Disease. Designed to Elucidate the Action of the Imagination. By Daniel Hack Tuke, M. D., F. R. C. P., LL. D. Second American from the Second English Edition. Philadelphia: Henry C. Lea's Son & Co. 1884.

Thirteenth Annual Report (Year 1883) of the Board of Directors of the Children's Hospital of the District of Columbia. Washington. 1884.

Transactions of the Medical Association of the State of Missouri at its Twenty-Sixth Annual Session, held at Jefferson City, Mo., May 15–17, 1883.

Eczema and its Management. A Practical Treatise based on the Study of 3000 Cases of the Disease. By L. Duncan Bulkley, A. M., M. D. Second Edition. New York: G. P. Putnam's Sons. London: J. & A. Churchill.

Medical Education and the Regulation of the Practice of Medicine in the United States and Canada. Prepared by the Illinois State Board of Health, and Published by permission of the Board. Revised and Corrected to March 1, 1884. Chicago: W. T. Keener. 1884.

Circulars of Information of the Bureau of Education. No. 1. 1884. Meeting of the International Prison Congress at Rome, October, 1884. Washington. 1884.

Sixth Annual Report of the State Board of Health of the State of Connecticut for the Fiscal Year ending November 30, 1883. Hartford, Conn. 1884.

Lectures.

THE OPERATION OF OVARIOTOMY.

A LECTURE DELIVERED BEFORE THE FOURTH CLASS STUDENTS IN THE HARVARD MEDICAL SCHOOL.

BY JOHN HOMANS, M. D.,

Surgeon to the Massachusetts General Hospital, and Clinical Instructor in Harvard University in the Diagnosis and Treatment of Ovarian Tumors.

In publishing the following lecture to students it may be proper for me to say that I have opened the abdomen for various purposes two hundred and three times. I have done the operation of ovariotomy one hundred and fifty-nine times. My first five cases of ovariotomy were performed without any antiseptic precautions whatever and all died. In the next one hundred cases I used antiseptic agencies, including spray. Of these thirteen died and eighty-seven recovered. Since then I have operated for ovariotomy fifty-four times with four deaths. My last thirty cases have all recovered. I ought, in this connection, to say that I have never declined to operate but once, the patient in that case having been already tapped to the amount of 2270 pounds in five years. I have operated upon all the other cases that have come to me, and although my late continued success is doubtless owing to good fortune, I feel that I can now perhaps do the operation better than I could at first.

THE OPERATION OF OVARIOTOMY.

Preparation of the Patient. Usually little preparation is required. For forty-eight hours before the operation I restrict the diet to flour gruel made by boiling equal parts of milk and water together for about an hour, gradually adding the flour until the gruel is made smooth and free from lumps. I order half an ounce of castor-oil about twenty hours before the operation, and an enema just before etherization. The object of these measures being to empty the bowels completely so that they will not interfere with the operation by their distention, nor by being plugged prevent the passage of flatus afterwards. If the patient has not taken a hot bath for some weeks, and if her strength will permit, I order one the day before operating.

The Anæsthetic. Ether is the best. It does not cause much vomiting if nothing is taken into the stomach for five or six hours before its inhalation.

Menstruation. I prefer not to operate while the menses are present, and seldom do so. The best time is about two days after the catamenia have ceased.

Exceptional Procedures. Sometimes it is necessary to tap the patient a week or two before ovariotomy to enable her to breathe more easily, to take more food, to lie down, to secrete more urine, or to lessen her weight and size that she may bear transportation. I have done it in exceptional cases for all these reasons. I drew by tapping sixty pounds of ovarian fluid from a woman in a tenement house out of town, brought her to the city in an ambulance,[1] and removed an ovarian tumor weighing fifty pounds. We could hardly have transported this woman with a tumor weighing one hundred and ten pounds. Again I have in six instances operated while a hæmorrhagic flow was going on from the uterus, because the catamenia had come on so irregularly that after waiting and postponing the operation it seemed that no calculation could be made. All these patients recovered.

Instruments required. A scalpel, a probe-pointed bistoury, a director, dissecting forceps, Nélaton's cyst forceps (at least six pairs), two Dawson's clamps, strong compressing forceps, with short and long blades for holding bleeding points, or bands of adhesions, of these about a dozen pairs, a large trocar with rubber tube attached for emptying the cyst, retractors, needles, a needle holder, carbolized silk and catgut, a steel sound, a catheter, Dieffenbach's hæmostatic forceps, Paquelin's thermo-cautery, and an aspirator (all the metallic instruments except the knives should be nickel-plated), three dozen towels, about forty clean soft sponges of various sizes, which have been soaking for several weeks in a five per cent. solution of carbolic acid. I have three barrels filled with solutions of carbolic acid, and these barrels are kept full of sponges. Each barrel is used alternately. Some of my sponges have been soaking for ten years. I formerly used sponges but once, but now I use them over and over after they have been cleaned; hot water bottles to put about the patient; several large clean tin pails, brandy, an enema syringe, plenty of hot water to wash the sponges if the operation should be bloody or protracted, several clean rubber aprons for myself and my assistants, that I may not soil my clothes, nor be thinking about it, a strap to buckle over the patient's knees and under the table, and wristlets to confine her hands.

Spray. I always use the spray and need a steam atomizer. I do not believe that the spray is absolutely essential, but I have had very good success with it, and have never known that it has done any harm.

There are other instruments that I carry with me, but those mentioned above I consider *necessary*, because although you will often need only a scalpel, a director, a pair of dissecting forceps, sponges, ligatures and sutures, yet you may need *all* your other instruments when you least expect to. *Never economize* when preparing for ovariotomy. Besides these things you will need the dressings for the wound, carbolized gauze and cotton-wadding, to fill up the void made by the removal of the tumor. You will also need a broad strip of sticking-plaster and a flannel binder to put around the patient over the dressings. I always wash my hands and forearms thoroughly with a nail-brush in carbolized water before beginning an operation and require my assistants to do the same.

Operating Table. A narrow operating table is necessary in order that your patient may be easily within reach from either side, eighteen or twenty inches being about the right width. In a private house I usually put two or more small tables or stands together, or lay a narrow ironing board from one table to another.

Etherization. The patient is not etherized in the operating room unless her respiration is very labored, in which case you may wish to shorten the period of etherization as much as possible. The dress having been tucked up, and the lower extremities covered with a blanket, the patient should be securely fastened to the table. For this purpose a broad strap is buckled around the table over the patient's knees, and her wrists are secured in soft padded leather wristlets connected by straps beneath the table. The abdomen is then uncovered and the carbolic acid spray (three per cent.) turned on. The abdomen is next wiped with a clean carbolized sponge, and two minute incisions, or marks,

[1] Loaned by Dr. Whittemore, Superintendent of the Massachusetts General Hospital.

are made about two and a half inches apart between the umbilicus and pubes in the linea alba, as a guide after the rubber sheet is in place. The spray is then shut off, and the skin of the abdomen dried with a clean towel. A rubber sheet about a yard and a quarter square, having a hole eight by four inches in the centre, through which the operation is performed, and the edges of which hole have been spread with adhesive plaster, is then applied to the abdomen, this sheet covering the patient to the neck and below the knees.

Positions and Duties of the Seven Assistants. I like to have seven, but I can get along with a less number. No. 1 etherizes. No. 2 stands opposite me on the patient's left hand, and helps to put compressing forceps on the bleeding points before the peritoneal cavity is opened. He then compresses the abdominal parietes, and after the cyst is removed ties vessels or keeps the intestines within the abdominal cavity if they tend to escape. No. 3 arranges and gives me the instruments. No. 4 stands on my right hand, sponges the wound, and catches any cyst-fluid that might run back into the abdomen. No. 5 stands on my left hand and draws up the peritonæum at the upper part of the wound, so that I may tap the cyst as high up towards the sternum as the incision will allow. He also gets the Paquelin's cautery ready when I am about to divide the pedicle. No. 6 supplies No. 4 with sponges, and me with towels, which he has kept clean and warm. In keeping the sponges ready for me he has much the most active duty among the assistants in a long and difficult operation. Finally, assistant No. 7 oversees the spray, and keeps a tally upon paper of the number of sponges placed in the abdomen and taken out. This duty is a responsible one. This plan is simpler than counting the sponges beforehand, as it sometimes happens that a sponge is torn in two, and as the important point is not to sew up a sponge within the abdomen I think it safer to count those that go in and come out rather than all the sponges before and after the operation scattered about the room.

Perfect silence should be kept by all the assistants and spectators.

The steps of the operation are these: (1.) Make the incision down to the rectus muscle. (2.) Stop all bleeding in the abdominal walls. (3.) Open the abdomen and explore for adhesions. (4.) Tap the cyst as high as possible. (5.) Detach the adhesions. (6.) Draw out the cyst and clamp the pedicle with Dawson's clamp, burn it off with the cautery, tie it, and remove the clamp. (7.) Examine the other ovary, and remove it if necessary. (8.) Thoroughly sponge out the abdominal cavity. (9.) Close the wound. (10.) Apply the dressings, and put the patient in bed.

(1.) The incision should be made in the median line rather nearer the pubes than the umbilicus, and at first less than three inches long, to be extended upwards if necessary, but always to the left, because the umbilical vein runs upwards to the liver on the right. This incision generally suffices, and one beyond five inches is rarely necessary. (2.) All bleeding must be stopped before the peritonæum is opened. I use compressing forceps, and prefer the little instruments called Dieffenbach's forceps. To each one I tie a piece of small fishing line about twenty inches long, and put a little weight of lead at the other end. When I see a bleeding point I pick it up with the little forceps and throw the weight and line over the patient's side. I attach this line in order that none of the forceps may fall into the abdomen if I knock them off. It is much easier to work through an opening surrounded by these little instruments than through one bristling with forceps, each one of which is five or six inches long. (3.) Explore with your hand or with a nickel-plated steel sound for adhesions, unless the cyst obviously slides down and up with the breathing of the patient. If the tumor is surrounded by ascitic fluid a certain amount runs out, and is conveyed by the rubber sheet into a pail on the floor. If there are adhesions to the walls you may separate them more or less before disturbing the cyst, although you must be careful not to rupture it. But adhesions to the omentum and intestines are better left till you have emptied the cyst by tapping. (4.) Tap the cyst with the large trocar, and be sure that the end of the rubber tube is in the tub under the table, or else the fluid will run over the floor. As the fluid escapes the cyst becomes flaccid, and can be drawn out. After some of the fluid has escaped I draw up the wall of the cyst on the trocar, and fasten it by the lateral toothed clamps, which hold it tightly. The canula thus fastened becomes an excellent handle, and with it the cyst is drawn out. If in tapping I happen to strike a small cavity and do not lessen the size of the tumor much, I seize the cyst wall with two or more of Nélaton's cyst forceps and hold it outside the wound while I withdraw the trocar and pass my hand into the tumor to break down the septa, if they are not too vascular and solid. If I think it unsafe to break down the interior of the cyst on account of probable hæmorrhage within the cyst, I withdraw my hand, wipe it carefully on a carbolized towel, and enlarge the incision. I now lift the tumor out of the abdomen, and secure the pedicle in Dawson's clamp. If there are serious and extensive adhesions to deal with, I sometimes secure and divide the pedicle. Then I have the tumor more movable, as it has been freed from its attachments to the uterus and broad ligament. I also know that no hæmorrhage can be going on within the cyst. All this time the assistant opposite me and the one on my right hand are carefully preventing any cyst fluid from running back into the abdomen. (5.) Separate the adhesions. While the tumor is being withdrawn, adhesions to the parietes, to the omentum, or intestines will show themselves. If they do not seem vascular they can be separated by the fingers. If vascular they may be divided by the cautery, or tied with catgut or silk in two places, and divided between the ligatures.

If a portion of the cyst wall is very adherent to the bowel it is best to cut out the adherent part and leave it. I then peel off its inner secreting surface if I can without doing violence. Great delicacy must be used in handling adhesions to the bowels or liver. I now examine the separated omentum for bleeding points, or leave it till the cyst has been removed and then do so. It is best examined by spreading it out on a warm carbolized towel. If bleeding vessels are found they must be tied, and the ligatures cut short. (6.) I clamp the pedicle with Dawson's clamp, because this squeezes the pedicle tighter than I can do it with a ligature, and then pass a small needle, threaded with a loop on which hangs a long silk ligature, through the pedicle close to the sulcus made by the compressing clamp, then I divide the loop and remove it. Next, after surrounding the pedicle and protecting the intestines by a warm carbolized towel, I burn through the pedicle with

Paquelin's cautery. I pass my ligature before dividing the pedicle, lest the latter should happen to slip out of the clamp and escape me while I am burning it off. After the pedicle is divided the tumor (which has been supported by an assistant that it may not drag on nor tear the pedicle) is removed, and the pedicle, still held in the clamp, is tied with Tait's knot, which I have described to you, and which you will find figured in his book. I now remove the clamp, and if there is no bleeding I cut the ligature close to the stump and let it drop back into the pelvis. I used to leave the ends of the ligature long until I was ready to close the abdomen, and then pull the stump up and cut them off, but one may possibly forget all about the ligatures, and leave several feet of silk unnecessarily within the abdomen, or the search for them may be tedious, as they may wind themselves around the folds of intestine and mesentery, and tear them when being withdrawn. The use of Dawson's clamp and the cautery are not absolutely necessary, but I feel safer when I use them. (7.) Examine the other ovary, and remove it if it contains cysts of the size of a filbert or is otherwise diseased. (8.) Thoroughly sponge out the abdominal cavity with sponges prepared as I have told you. I am particular in mopping up the spaces between the uterus and rectum and the uterus and bladder. I use soft sponges about two and a half inches in diameter, held in Nélaton's cyst forceps. When my sponges come out dry and clean I leave one in its holder behind the uterus, and do not remove it till I have passed all my stitches through the abdominal parietes, then if it comes out wet I resume my sponging before closing the incision. (9.) I put a soft, flat sponge over the bowels beneath the wound, and proceed to put in my sutures. These include the peritonæum and all the different layers of the parietes, and are best passed by having a needle at each end of the suture, and passing each from within outward with a needle holder. As the sutures are passed the opposite assistant ties the ends loosely together, and the assistant on the right hand wipes off any blood that may ooze from the needle holes externally, while the flat sponge within catches any that may run down from the holes made by the needles in the peritonæum. I now remove the little compressing forceps or "snappers," as I call them, and generally find no bleeding going on. I withdraw my sponge from Douglas's space, take out the flat sponge, and tie the sutures. Then I put in any superficial sutures that seem necessary. I use carbolized silk of various sizes, but for the deep sutures through the abdominal walls I use small needles and as large silk as will pass through the eyes. (10.) Apply the dressings, and put the patient in bed. I put on dry carbolized gauze and enough new and clean cotton-wadding to fill up the hole left by the removal of the tumor. Next I pass a broad piece of adhesive plaster tightly round the abdomen over the dressings; this should be wide enough to extend from just above the trochanters to the sternum. Over this I pin a soft flannel swathe. The patient is then carried to her bed on the operating board, and gently slid off the board into the bed. If there has been any shock hot water bottles are placed around the patient, care being exercised that they shall not burn her.

Treatment after Ovariotomy. The patient should be left alone with her nurse, and should be allowed to sleep as long as she will. Sometimes there is vomiting, and sometimes not, but nothing need be done for it. As a general rule the temperature is not much affected; it rarely rises above 100° F. during the whole convalescence. An opiate is generally required during the first twelve hours after the operation, and sometimes never again. I generally give one sixth grain of morphia or its equivalent in solution by means of Bigelow's opiate enema syringe, which holds a drachm of fluid, and was figured in the Boston Medical and Surgical Journal, vol. xcvi. (1877), p. 360. The cardinal principle in taking care of a patient after ovariotomy is to give all opiates and stimulants *by the rectum* until flatus passes the bowels or until all symptoms of nausea or vomiting have been absent for many hours.

Original Articles.

CASES OF RUPTURE OF THE LIVER.[1]

BY F. W. DRAPER, M. D.

The following notes are offered in illustration of the gravest form of injury to which the liver is subject, as the result of external violence: —

I. The patient in this case was a boy, Robert S., four years old, amiable in disposition, and sound in health. He lived with his mother and step-father, the latter being the janitor of an apartment hotel, in the basement of which the family of three occupied rooms.

The incidents of the boy's last hours of life can be presented best in their chronological order. Between three and four o'clock in the afternoon of a day early in November he was playing with two of his mates of his own age. The three lads had found, in a vacant lot, a low tank or pan, made of quarter-inch boiler-iron, an appliance which masons had used for drying sand. It measured five feet in length, two feet in width, and its sides were eight inches high at the highest. In one end of it was a collection of cobble-stones and brickbats, occupying less than half the space. The iron had become warped by use, and this, with some irregularities in the surface of the ground on which it rested, made it possible for the boys to tilt or rock the pan a little, as they would a boat. In the course of their play the children fell from their improvised boat, striking on the soft ground. Robert in his turn fell out; one of his mates said that he seemed to be hurt a little and that he cried, but that he presently resumed his play and seemed none the worse for his slight mishap.

At a quarter past four he was seen "playing horse" with one of his fellows, running about in the square in front of his home as if he were entirely well.

At five o'clock a lady saw him playing "hop-skip" with her little boy, and both the children were as active as usual.

He was next seen crossing the square going towards his home, a distance of about two hundred feet from the spot where he was playing last. A young girl of his acquaintance spoke to him here, and he replied, to use her own words, "in a sort of way as if he was sick;" although he was not crying, nor did he tell her, in answer to her question, that anything had happened to him. This little girl, evidently truthful and having no motive to be otherwise, was the only one of all who saw him who noticed anything unusual about him.

[1] Read before the Boston Society for Medical Improvement, March 24, 1884.

The statement of the step-father, D., is in order at this point in the narrative. He said that at five o'clock, as he was standing at the front door of the hotel looking out upon the street, he saw Robert run across the square as fast and as smart as he ever saw him run; then he saw him pass down along the side of the building toward the rear entrance to the basement where he lived. In about seven minutes he (the step-father) went down stairs to the basement and found the boy kneeling in front of a squirrel cage which was on the cemented floor; his head was resting against the wires of the cage front. He complained that he was sick, that his "belly ached." D. took the boy into an adjacent room and began to undress him; in the course of this proceeding the lad's head dropped forward and his body swayed. Upon being asked how he got hurt, the child replied feebly, "Velocipede!" and spoke the name of a neighbor's boy, one of the two with whom he had been playing during the afternoon. D., who up to this time had been alone with the boy, now called his wife, Robert's mother, from an upper room in the hotel where she was at work. Presently the child had a convulsion. When he had recovered from this and was raised from the lounge on which he was lying, he screamed with pain. To his step-father's further questions as to the manner of his injury, his only reply was that he was sick.

Between half-past five and six o'clock a lady occupying rooms immediately over the basement went down stairs to the janitor's rooms to get a key which he had promised her. She knocked at his door, and after some delay, during which she heard a whispered conference between him and his wife, she was admitted. Entering she saw the child lying on the lounge in great distress, turning from side to side, pale, moaning, and apparently dying. She besought the man to go out for a physician. He went with reluctance, and soon returned with word that his search was unsuccessful. The boy had another convulsion, and the women urged D. to go again for medical aid. He responded to their appeals after some delay, and reappeared presently with a physician, whose relation to the case proved brief and simple. The child was moribund on his arrival, and death occurred in about ten minutes, at twenty-five minutes past six o'clock. The doctor's examination of the patient, before death and immediately after, led him to conclude that fatal internal hæmorrhage had taken place; while certain marks upon the body not present, according to the mother, when the child was dressed in the morning, aroused his suspicion still further, and suggested to him the propriety of summoning a medical examiner, upon the supposition that the boy had died by some form of violence. It was thus that the case came to the writer's notice for investigation.

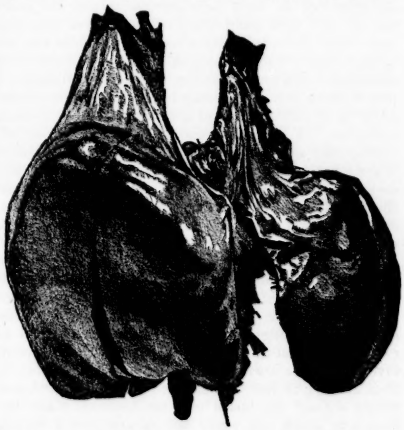
An autopsy was made eighteen hours after the death. The surface of the body was strikingly pale; the lips were fully blanched, and there was scarcely any post-mortem staining of the dependent parts. There were recent ecchymoses of small size on the forehead, the right cheek, the chin, the inner side of the right knee, just above the crest of the ilium, the back of the right hand, and the back of the right thigh. Besides these, there was a faint red discoloration, of the size of a silver dime, two inches below the left nipple and a little to the left of the middle line. This was the only mark on the skin of the chest and abdomen.

An ecchymosis, or line of ecchymoses, three eighths of an inch wide, extended obliquely across the back of the left hand. Upon the front of the left thigh were two parallel, dusky blue marks, corresponding in oblique course, in width and in color with that on the hand. These parallel linear ecchymoses were two inches apart. On the front of the right thigh and in direction continuous with the upper one of the two just mentioned was a narrow discoloration apparently made at the same time and by the same means as these. In other words, by placing the left hand with its palm posterior and its thumb against the outer side of the extended left thigh, one could readily believe that the ecchymoses upon the back of this hand and upon the front of the two thighs were to be associated in the matter of their cause.

In the peritoneal cavity there was a pint of liquid blood; a single, small, imperfectly formed clot lay against the under surface of the liver. The heart was pale but without other abnormality. The lungs were anæmic. The right lung at its posterior inferior border showed three small extravasations extending to the depth of half an inch. At the lower part of the posterior mediastinum, especially on the right side of the vertebral column, the tissues were infiltrated with effused blood.

The spleen and kidneys were exsanguine. The stomach and intestines were normal, and contained the partially digested remains of the last meal. The peritonæum behind the stomach displayed a ragged rent through which two fingers passed easily. The subperitoneal connective tissue behind the liver and duodenum, and overlying the right kidney, was extensively infiltrated with blood, and there was a similar alteration in the appearance of the parts in the left inguinal region and over the left side of the bladder behind and above the symphysis pubis.

The liver was ruptured through its entire thickness, the right lobe being freely opened from its anterior edge, just to the right of the gall-bladder, in a direction



almost exactly at right angles to the transverse plane of the body, and to such a depth that only about a finger's breadth of hepatic and peritoneal tissue remained at the posterior surface of the organ as a bond of union. The surfaces of this principal rent were

ragged, granular, pale, and slightly blood-stained. This extensive lesion was revealed plainly when the abdominal cavity was first opened.

Besides this extensive fracture other secondary injuries appeared on the surface of the liver. The lobus quadratus was ruptured superficially, presenting a fissure three quarters of an inch deep and an inch long. On the upper surface of the organ, to the right of the chief rupture, there was a linear and superficial rent about two and a half inches long, in general direction parallel with the principal opening, and in depth extending scarcely beneath the capsule. The outer edge of the right lobe showed limited areas of extravasation beneath the surface. Section of these revealed many deeply-seated, irregular rents in the substance of the organ. There was marked anæmia of the viscus, but in other regards there was nothing abnormal in its structure. The gall-bladder was torn from its attachments, and retained its connection only by its right border and by its duct.

Examination of the head discovered a small but distinct and recent ecchymosis under the scalp, just above the occipital protuberance. The skull was uninjured. The brain, instead of being anæmic as were the other organs and tissues, was moderately injected.

The manner in which this child received his fatal injuries has never been satisfactorily established. Diligent investigation by skillful detectives failed to solve the mystery. An inquest was held which resulted in a judicial report rehearsing the few facts determined in evidence, and indicating probabilities with sufficient clearness. It declared that "the death of Robert S. was caused by a rupture of the liver and consequent shock and hæmorrhage, which rupture of the liver was caused by a heavy pressure or violent blows upon the body of said Robert S. by some person or persons. There was evidence before the court of inquest tending to show that the step-father of said Robert S. had at various times abused and severely and unreasonably punished said Robert by blows and otherwise, and also that the said step-father was alone with said Robert just before said Robert died, and while so alone with the said Robert he, the said step-father, had time and could have inflicted the fatal wound upon the liver, and also other severe and fresh wounds, internal and external, that were found upon the body of said Robert S."

The step-father, D., was indicted for manslaughter, but has never been tried, the evidence being deemed insufficient to warrant a presentation of the case to a jury.

In the absence, then, of positive knowledge of the manner of the death, we are allowed to indulge in speculation upon the limited data in our possession. These data permit three hypotheses only: —

The first supposition is that the boy was thrown down and injured by means of a velocipede. But this is based on the step-father's statement that the child told him so, and on this alone. It is quickly disposed of by the fact that the velocipede alluded to was within doors during the entire afternoon.

The second theory is the one which, at the judicial examination of the accused, was strongly hinted at as that upon which he would base his defense, and it had the support of a well-known medical expert, who stated in private his belief in its value for that purpose. This view associates the fatal lesion of the liver with the slight fall from the iron pan on the hill-side more than three hours before the boy's death. It assumes that there is no irreconcilable incongruity in the following chain of circumstances: that a boy of four years, weighing fifty pounds or less, should fall on his left side over a thin, upright barrier eight inches high; that he should thus produce the double marks on the left thigh, and at the same time rupture the right lobe of the healthy liver not only nearly through its entire thickness antero-posteriorly, but in various other directions; that after this, though crying a little at the first after his hurt, he should go on with his play as if nothing had happened, and within an hour, regardless of the hæmorrhage then inevitably progressing in his abdomen, and undisturbed by the serious injuries to organs on both sides of his diaphragm, should run and jump after his usual manner; that at the end of all his sport returning to his home, without any accident on the way, he should "run as fast and smart as ever," to use his step-father's words; that seven minutes later he should be found faint, weak, and sick, unable to walk or stand; that upon this, the first intimation of serious trouble, the usual train of symptoms of fatal internal hæmorrhage should rapidly supervene; and that in a little more than an hour after the onset of grave indications, preceded by nearly two hours of apparently complete immunity from any sign of disability consequent on the injury, death should terminate the case.

A third view may be formulated thus: A child to whom, during the year since his mother's second marriage, his step-father has shown great dislike, manifested in repeated and cruel punishment for trivial or fancied offenses, returns to his home after an afternoon of play with his customary companions. No accident has happened to him to interrupt, except for a moment, his active exercise. The step-father, who has found recent occasion to reprimand the boy for staying out too late in the afternoon, sees him running home, and determines to administer still further discipline. Going presently to the basement where the child is alone, the mother being engaged in a distant room, the man proceeds to execute his purpose in his usual harsh and impetuous manner. The boy struggles. Two blows with a rod or similar instrument leave their marks on his thighs and left hand. For the purpose of restraining him in his attempts to free himself, or in order to subdue him by measures more persuasive than flagellation, or, perhaps, by accident only, the man brings his knee with force against the right hypochondrium and right infra-mammary region of the boy while he lies on his back on the floor. Observing that a startling change in the child has followed this act of violence its author desists, but before calling the mother to the scene he invents what he believes to be a reasonable explanation of the emergency, and puts into the injured lad's mouth words about his playmate's velocipede which he never uttered.

This theory of the case, though mainly evolved from the imagination, has in its favor its entire consistency with the undisputed facts.

II. Mary M., a married woman, aged twenty-eight, was found lying dead upon the floor of her bedroom at three o'clock in the afternoon of a Sunday in December, 1883. Two hours previously she had been speaking, at her own door, to one of her neighbors, nothing in her face, clothing, or demeanor betokening any departure from her usual condition of health. At this time her little boy, five years old, was the only one in the house with her, but during the morning her

husband had been at home, and had been heard engaged in a quarrel with her about domestic matters, and addressing her in words more emphatic than elegant or tender. Both husband and wife were noisy, especially when, as was not unusual with them, they were intoxicated.

What occurred between one o'clock, when one of the woman's neighbors saw her in her usual health, and three o'clock, when another neighbor found her dead upon the floor, is not known definitely, but the child, when he opened the door to admit the latter caller, said that his father had given his mother "a dirty licking." The husband was not in the house, but on his return, two hours later, he said to the officer who arrested him that while out for a walk he had been told that his wife was dead; that before he went out he had struck her, but with his open hand only; that in so doing he knocked her down, and she vomited afterward. Further details of the affair are not available.

Very little was discovered upon the body or about its surroundings at the preliminary inspection to aid in determining the manner of the woman's death. She was lying on one side at full length in the middle of the floor. Her face showed a fresh ecchymosis of both lids of the right eye, a contusion of the cheek, of the upper lip, and of the chin, with dried and clotted blood in the nostrils and about the mouth. There were also bruises on the left arm, over the left hip, on the left shin, and on the right hand.

Of some consequence in connection with the lesions found upon dissection were two very faint, scarcely visible, discolorations on the abdomen; one of these, an inch in diameter, was an inch and a half above the navel (just where the waistband of the dress-skirt passed around the body), and a little to the right of the median line; the other was immediately beneath the left border of the ribs in the mammary line. These were the only marks visible on the thoracic and abdominal walls.

The autopsy was made nineteen hours after the discovery of the body. The surface of the cadaver was pale, and the mucous membrane of the lips and mouth was notably exsanguine. There was a very slight degree of cadaveric staining of the dependent parts.

In the peritoneal cavity were forty-five and a half fluid ounces of liquid blood. This large effusion had proceeded from an extensive rupture of the liver which, beginning at the notch in the anterior edge, passed backward, involving the entire thickness of the organ nearly to the posterior surface, leaving as a hinge at the back a band of hepatic tissue and peritonæum less than an inch thick. The rent followed the direction of the broad ligament, and its surfaces were irregular, granular, and slightly reddened by blood.

Other fissures, superficial in situation and character, appeared at the base of the lobus quadratus and on the lobus spigelii adjacent to the main fracture. On the upper surface of the right lobe, near the anterior margin, and about two inches distant from the deep rupture, there was a superficial bruise of the liver two and a half inches in diameter. The liver was anæmic, but otherwise was of healthy appearance; it weighed three and a half pounds. The gall-bladder was uninjured.

The other organs of the body presented nothing abnormal beyond the pallor due to anæmia.

As in the previous case, so in this, accurate information concerning the manner of the death is wanting; but it is probable that in the course of the "dirty licking" which this amiable husband thought it to be his duty to bestow upon his wife his knee or foot came down with masculine force upon the parietes overlying the liver and split that organ from front to back.

A brief mention of some of the questions naturally suggested by cases like the foregoing will form a fitting conclusion to this paper. Allusion will be made in this connection to injuries of the severer kind only, to deep fractures of the liver, and not to superficial lacerations of the organ, from which, to borrow the words of Mr. Pollock, "the patient may recover without much suffering and without any particularly marked indication of the existence of the injury."[1]

And, first, it may be asked, what kind and what degree of force are required to produce the severe injuries described? Casper says,[2] "Healthy organs never rupture spontaneously, . . . and even healthy organs are never ruptured but by the employment of considerable violence. Therefore, rupture of the liver, lungs, etc., may uniformly be taken as conclusive evidence of the previous application of great violence." That this statement, by high authority, expresses the rule, is scarcely open to doubt. Although the liver is, of all the abdominal viscera, the most frequently ruptured, its large size, exposed situation, and friable structure counting against its immunity, yet if the organ be not softened or enlarged by structural changes, if it be of normal size and sheltered in its proper position with the overhanging grating of ribs in front and at the side, and with the vertebral column and thick spinal group of muscles behind, it would seem to be well favored by nature to escape casualty, and Casper's allusion to "great violence" does not appear to be too strong. The recorded cases of serious rupture of the liver are generally illustrations of the severer forms of accident. The victim has jumped or fallen from a height of many feet, striking on a pavement or other unyielding surface; or the wheels of a loaded wagon have passed over his body; or a heavy object has fallen upon him; or he has been caught between the buffers of cars; or he has received a blow from a windlass bar; or he has been thrown with great force by machinery against a wall; or he has been kicked by a horse; or a locomotive has struck him; or in the course of an altercation he has fallen under his assailant, who thereupon, half rising, has pressed his knee with great vigor into the right side of his prostrate antagonist, — these are the usual stories of the manner in which the injury was received. But are there no exceptions? Must one, as Casper states it, "uniformly" predicate great violence upon deep ruptures? We are concerned rather to establish whether such lesions do not sometimes follow comparatively slight accidents or a moderate exhibition of force. Diligent search may be rewarded by the discovery of a very few exceptions to prove the rule, but can hardly bring to light enough to show more than a rare chance that deep lacerations of the liver may follow trivial falls or blows.

Well-authenticated cases of spontaneous rupture must be reckoned among the curiosities of surgical literature. Beck[3] alludes, in a foot-note, to such a case "which proved suddenly fatal during labor," but qualifies the value of the report somewhat by the

[1] Holmes's System of Surgery, iii., page 896.
[2] Handbook of Forensic Medicine, i., page 132.
[3] Elements of Medical Jurisprudence, ii., page 377.

statement that the patient had probably been "injured by violence on the part several months previous."

Taylor states[1] that the liver "may be ruptured merely by a sudden action of the abdominal muscles; an accident of this kind happened to a person who was endeavoring to avoid a fall from his horse."

The symptoms of a deep rupture of the liver are commonly those of collapse. There is coldness of the entire surface of the body, with marked pallor; the features are pinched, anxious, and exsanguine. The pulse is feeble, the respiration is sighing. There is extreme restlessness, though the mind remains clear. The sense of faintness and distress is prominent. The abdomen is distended and tympanitic. There is pain, referred chiefly to the injured region. Some of these symptoms are due directly to the violent solution of continuity in the parts involved, to the stretching and tearing of the peritonæum, and, in less measure, to the laceration of the liver itself. But most of the striking indications of profound collapse arise from the inevitable hæmorrhage, which is rapid and profuse, according to the depth and situation of the lesion and the size of the hepatic vessels which are rent asunder. It is easy to understand that any considerable laceration of this large organ must result in serious loss of blood, for its three distinct sets of vessels endow it with special vascularity, while the conditions under which the blood escapes are such as to promote rather than to restrain the effusion. The natural aids to spontaneous hæmostasis in external wounds are absent; the exposure to the air and to cold, the retraction of the divided vessels within their sheath, and their compression by the contraction of the tissues around them, — all these are wanting. "A laceration of the liver is in much the same condition as an external wound with a warm sponge upon it; the flow of blood is favored by the high temperature of the interior of the body. And the hepatic veins, not being contractile or surrounded by any loose tissue, cannot close or even collapse."[2]

Under such circumstances, favoring profuse and rapid bleeding, immediate and profound shock would be the natural and usual consequence of the grave injuries under discussion. But this is not a rule without exception. Cases have been recorded in which extreme damage to the liver has been borne with extraordinary immunity from bad symptoms. Dr. Fergus has reported such an instance.[3] A boy of seventeen fell from the shaft of a cart, the wheel of which passed over the abdomen just below the false ribs. The boy complained of pain in the abdomen, but not of a severe character, and not materially increased by pressure; the amount of shock was trifling. "He seemed to suffer very little." The case ended fatally, however, and the autopsy revealed a deep laceration of the liver and a rupture of the gall-bladder. In another case, mentioned by Taylor,[4] a man applied at a hospital for treatment for an injury to his abdomen, but as there were no urgent symptoms present to confirm his story he was sent away. A few hours afterward he was found dead. On inspection the liver was discovered to be lacerated nearly through its diameter, and a basinful of blood was in the abdominal cavity.

A question of considerable medico-legal interest is involved in these cases, and is naturally suggested by this statement of the usual symptoms. To what degree does a deep rupture of the liver disable the patient and render him incapable of exertion or of resistance if injured by an antagonist in an affray? The first answer that occurs is that such an injury would immediately and fully overcome its victim, and that a man would be so prostrated by the sudden shock as to be unable to make further effort save with great pain and difficulty. Many reported cases, indeed, afford ground for such an answer, if precedents were required. In a case within the writer's personal knowledge, in which a young and muscular man threw an elderly opponent upon his back on the ground, and there knelt upon him with great force, rupturing the liver externally and breaking up its substance to a considerable extent internally, the immediate effect upon the pugnacity of the older of the two wrestlers was very marked; he was fully deprived of his power to resist, and had to be carried home. In another instance a policeman was endeavoring to take a prisoner to the station-house; the latter attempted to escape, and the officer knocked him down and fell upon him, his abdomen receiving a blow from the officer's knee. The prisoner suffered great pain when he was lifted up, but he was able to walk to the station with assistance; he soon became insensible, and died in twenty minutes. The liver was found ruptured in three places, and upwards of three pints of blood were effused in the abdomen.

In very rare cases, indeed, the consequences are less serious. The injury may be borne with such comparative freedom from shock, and the hæmorrhage may be so slow in its progress, that the patient can walk without assistance and perform other acts that seem extraordinary. But the books do not record any instance in which a child has continued at his active play with evident enjoyment after receiving injuries to the liver like those described in Case I. Taylor formulates the rule clearly; "although," he writes,[5] "in cases of severe wounds we may allow that persons may perform various acts of volition and locomotion, yet the presence of a mortal wound, especially when of a nature to be accompanied by great loss of blood, must prevent all *struggling* or violent exertion on the part of the wounded person; such exertion we must consider to be quite incompatible with his condition."

With regard to the gravity of these injuries to the liver as affecting the life of the patient there can be but little difference of opinion. Most surgeons would agree with Hennen that a deep wound of this organ is as fatal as if the heart itself was engaged.[6] But it would be an error to insist that all cases, even of the severer type, terminate as speedily as the two reported at the beginning of this paper. While it is true that in nearly all the instances of deep rupture of the liver death quickly removes the sufferer, the interval after the injury being longer or shorter, varying from a few minutes to thirty-six hours, according to the amount of hæmorrhage, in some notable exceptions life is prolonged for several days. In these unusual cases the fatal issue is due commonly to peritonitis, the patient's system having had time to react from the primary shock and to develop secondary inflammation of the torn peritonæum. A case is related,[7] however, in which, the liver having been ruptured through its entire thickness by a fall from a third-story window, the

[1] Principles and Practice of Medical Jurisprudence, i., page 667.
[2] Holmes's System of Surgery, i., page 447.
[3] Medico-Chirurgical Transactions, xxxi. (1847).
[4] Principles and Practice of Medical Jurisprudence, i., page 668.
[5] Principles and Practice of Medical Jurisprudence, i., page 634.
[6] Military Surgery, page 439.
[7] American Journal of the Medical Sciences, 1870, page 415.

patient survived ten days, and died at the end of that interval by hæmorrhage. In the case reported by Fergus, already referred to, where the primary symptoms were insignificant, peritonitis developed on the second day; on the fourth day the patient was pronounced convalescent, but on the sixth day he was suddenly seized with severe pain, and a second onset of peritonitis declared itself. Death ensued on the ninth day, and at the autopsy the liver was found ruptured quite through its substance to the depth of two and a half inches from its anterior border. The gall-bladder also was broken.

Not only may death be delayed in these cases, but also, under peculiarly fortunate conditions, considerable progress toward the repair of the injured tissues may be made. A man was admitted into Guy's Hospital in a state of collapse, exsanguine, and complaining of intense pain in the abdomen. The pain gradually subsided, and the patient appeared to be doing well, when he died quite suddenly, three days after the accident, while attempting to raise himself in bed. The peritoneal cavity contained a large quantity of blood. There was an extensive fracture of the liver. The torn parts were well adapted to each other, and pretty firmly united by the fibrine of the extravasated blood.[1] In another case, under treatment at St. George's Hospital, a man had fallen, striking on his back, fracturing the seventh cervical vertebra and injuring the spinal cord. Death occurred three weeks after the accident. "An extensive rupture was found on the upper surface of the right lobe of the liver. This rupture, which measured five inches in length, was perfectly united with the exception of some few points where the peritoneal coat still remained broken. The rupture did not extend very deeply into the organ."[2]

These indications of what nature may do in the direction of mending a badly injured tissue serve to show on the part of the liver an extraordinary indifference to violent treatment, and to confirm what has already been suggested, that the hæmorrhage is the main factor in the fatal result. In fact one of the lessons taught by the records of injury to this organ is its patient tolerance of abuse. Not only does it bear with resignation the standing and libelous reproach of incontinently getting "out of order," and rendering its unhappy owner "bilious," but it suffers more violent treatment without serious rebellion. Three cases may illustrate this.[3] By the accidental discharge of a pistol a man drove a ramrod through the abdominal wall into his liver, and laceration of that organ to a depth not ascertained was felt through the external wound. He had an abscess at the spot, but was discharged well in forty-three days. A boy, seven years old, was shot in the right hypochondrium, and a part of the anterior wall of the abdomen was carried away. The liver protruded through the opening. The patient had no proper attention for four days; at that time the exposed part of the organ was gangrenous. The sloughing portion, equal in amount to half of the right lobe, was cut away, and the boy recovered. A Hindoo, between sixty and seventy years old, was wounded with a spear. The liver escaped injury, but pushed through the abdominal wound. The extruded part, weighing an ounce and a quarter, was excised. The patient was well in three weeks.

[1] Holmes's System of Surgery, i., page 897.
[2] Ibid, page 897.
[3] From Eve's Surgical Cases, pages 319 and 320.

But although the liver will endure an astonishing amount of violence of the kind described, where much hæmorrhage is not the result, and, as Harley has pointed out,[4] may tolerate, "with complete immunity from danger, repeated puncturing by exploring needles and trocars," its deep rupture, attended inevitably with hæmorrhage, is, as we have seen, a far more serious matter, and usually gives early opportunity to study its post-mortem appearances.

The external evidences of the cause of death are generally summarized in the pallor and marked anæmia of the surface of the body betokening the effusion of blood within the abdomen. If one looks for large and deeply discolored ecchymoses upon the thorax and abdomen to correspond with the extensive lesions beneath he will commonly be disappointed in his search. Such outward proof of violence is rarely observed. One of the earliest lessons which the examiner in medico-legal cases learns is that there may be the most wholesale destruction of thoracic and abdominal viscera without any external sign of the force which produced it. Of this the cases under our present study are illustrations.

The interest of the internal examination attaches chiefly to the appearances presented by the injured liver. The rent, if it be deep, will generally be found in the large right lobe or at the boundary line between the two lobes, following the direction of the broad ligament above and of the longitudinal fissure below. There is good reason for this latter location; the notch in the anterior edge, indicating the partition between the two lobes, is sufficiently deep and exposed to make it a good point of departure for any force acting like a wedge, while the corresponding gap at the posterior border rests upon the unyielding vertebral column, and is thus afforded a support which favors the forcible separation of the two lobes from the front backward. If there are other secondary, superficial fissures they are seen mostly on the convex surface, near the front, and in general direction parallel with the main fracture; rarely they take a transverse or very oblique course. The edges of the lacerations are irregular in outline, and are but slightly parted. The torn surfaces of the organ present a rough, granular appearance, moderately stained with blood, with some partly detached masses of hepatic substance hanging loosely upon them. The blood which has escaped from the broken vessels is found collected in the deeper parts of the abdomen and pelvis rather than in close relation to the liver, and is singularly free from coagula.

[4] Diseases of the Liver, page 652.

REASONS FOR THE EARLY REMOVAL OF OVARIAN TUMORS.

BY J. C. IRISH, M. D., LOWELL.

WHILE the discussion of this subject may present very little that will not have already been carefully considered by ovariotomists, still it may be of interest to those members of the profession who are occasionally confronted with this very grave question: to decide for their patient when in its progress an ovarian tumor should be removed. Some, too, may be led to consider whether the quite prevalent opinion that a patient should not be exposed to the dangers of ovariotomy before her health is enfeebled or her life imperiled may not be erroneous and unfortunate.

In reference to the time when ovariotomy should be advised, Professor Peaslee, in his Treatise upon Ovarian Tumors and Ovariotomy, laid down the following rule: "When the general health has become somewhat impaired, and not till then, the time for ovariotomy has arrived."

This precept of Dr. Peaslee, given in 1872, has since been, in the main, accepted by American writers upon ovariotomy. Drs. Thomas and Emmet, however, in their late publications, give this rule with much less emphasis than did Dr. Peaslee, and with some very important exceptions.

While this teaching has produced a very general impression among the profession at large that ovariotomy should not be undertaken until the patient's heaith is considerably deteriorated, yet among ovariotomists at the present time a different sentiment is fast gaining ground, many of them advising the operation while the patient is still in robust health. The wisdom of this course of action is already apparent in the rapidly increasing per cent. of success.

Spencer Wells in the edition of his work published in 1872 gave essentially the same rule in regard to the best time for ovariotomy as that just quoted from Dr. Peaslee. But in 1882 he says: "I have become more and more disposed to advise the removal of an ovarian tumor as soon as its nature and connections can be clearly ascertained and it is beginning in any way mentally or physically to do harm." Yet a glance at the last hundred cases in Mr. Wells's published table would persuade the reader that he really in practice followed the first clause of his rule rather than the second, for among this hundred there appear seventeen cases in which the tumor weighed ten pounds or less, one of them weighing only four pounds. Now it is very improbable that ovarian tumors of this size could be doing any appreciable harm, either mental or physical. It is more probable, rather, that they were removed as soon as their character could be clearly ascertained.

One great argument in favor of delay is, that after the tumor has become sufficiently large to distend and press for a time upon the peritonæum, it so changes the character of that membrane as to render it less liable to a severe grade of inflammation, and that the patient, therefore, is in less danger of death from peritonitis.

Referring again to Mr. Wells's last hundred reported ovariotomies, we find that not one of the hundred died of peritonitis, though there were eleven deaths, and in seventeen cases the weight of the tumor was only ten pounds or less.

In his series of one hundred cases from January 1, 1869, to January, 1871, there were ten deaths from peritonitis. The average weight of the tumors in these fatal cases of peritoneal inflammation was twenty-two and one third pounds, while the average weight in the whole series was twenty-one and one third pounds.

Of about forty cases of ovariotomy that have come under my observation, but two died of peritonitis, and in both instances the tumors were large and had exerted considerable pressure upon the peritonæum.

So far as these histories teach anything, they show that the size of the tumor is not an important factor in determining a fatal result from peritonitis. They also indicate the recent rapid decrease in the frequency of this formidable sequel to ovariotomy, the series of fourteen years ago embracing ten deaths from this cause, while the later contains not one.

The experience of other ovariotomists in this regard, as I learn by inquiry and from their written statistics, coincides with that of Mr. Wells.

Peritonitis, therefore, has well nigh ceased to be a prominent cause of death after ovariotomy, although the operation as a rule is performed much earlier than ten years ago. There are several causes, I think, that have contributed to this favorable result. Important among them is the improved method of treating the pedicle, namely, by short ligatures and replacement within the abdominal cavity, a mode of treatment that has very generally been substituted for the clamp and long ligatures brought out at the lower angle of the wound. Another is the great care now exercised in preventing the entrance of any extraneous matter into the abdominal cavity, or if this has been unavoidable, its thorough removal, together with the great pains taken to render the condition of the peritonæum an aseptic one.

Another reason given for deferring the operation until the patient is debilitated by the disease is that thus a certain amount of comfortable life is secured to her which would have been lost in the event of a fatal issue. At a time when about one third of the whole number who submitted to the operation died this argument was a cogent one. But now, when not one in ten, excluding the delayed and tapped cases, die, and when, in the near future, not one in twenty will die from the operation, this plea for delay loses its great force.

The dangers, too, that constantly increase and always menace a patient with an ovarian cystoma, are so great as to far outweigh all the advantage that any postponement of the operation can bring.

Although adhesions of the cyst wall to surrounding structures may form at any time during the growth of an ovarian tumor, yet in the majority of cases they do not occur before the cyst has become large enough to entirely fill the abdominal cavity, and are most common in those cases where the tumor has reached an age of two or more years. They are, therefore, complications that an early operation would generally avoid. While adhesions, however extensive they may be or however closely they may attach the cyst to the abdominal parietes, omentum, intestines, or brim of the pelvis, are not a contra-indication to ovariotomy, still they convert an operation that in itself is really a very simple one to one of great difficulty and hazard. I have seen three cases in which an attempted ovariotomy could not be completed on account of immediate adhesions to important viscera. In two of the three the disease had existed about three years, without much impairment of health, and without giving very great inconvenience. For this reason, in accordance with the rule we are discussing, they were advised to defer an operation until some more urgent necessity for it arose. The consequence was that they each, for three years, carried about with them an ugly, mortifying deformity, and then died of an affection of which they might have been cured three years before.

In passing from this well-worn topic of adhesions to the discussion of degenerative changes that take place, the following case is presented as an illustration of the former, and especially as an example of the insidious general poisoning that may follow degenerations of even the interior structure of an ovarian cystoma: —

Miss C. N., Rockville, Conn., aged nineteen; operation September 19, 1879. The tumor was noticed one year before. Her general health had apparently been

unimpaired until three months ago, when she began to lose flesh and strength. Latterly her failure in health had been rapid.

September 18th we found her with a pulse 110, a rapid respiration, and a hectic flush upon each cheek. No abnormality of the patient's lungs could be found, and her attending physician, Dr. Kisley, as well as myself, was at a loss to account for her condition of hectic. All was explained, however, when the contents of the tumor were withdrawn. The liquid had the physical appearance of pus of considerable consistency, and in amount was about nine quarts. The tumor had evidently been a multilocular cyst whose division walls had become degenerated and broken down. Hence the blood-poisoning that would undoubtedly have ended the patient's life very soon had not removal been effected. The cyst was adherent to the parietal walls anteriorly and at each side. The pelvic and intestinal adhesions were also extensive. Many of them were firm fibrous bands, with blood-vessels of considerable size, while in several places the cyst was agglutinated to the intestinal surface. The separation of these adhesions was attended with many difficulties and occupied two and one half hours. The patient finally recovered after a very tedious convalescence, and is now in good health.

Tracing the natural history of an ovarian tumor through its entire course, it will be found to have caused death in one of two ways: either by its size interfering with the normal functions of the abdominal and thoracic organs or by degenerative changes that have occurred in its structure. But cases of the former class are rare, and especially so, because the great size is usually relieved by tapping when the tumor becomes oppressively large. Such a tumor that would have become fatal at last on account of its size alone now becomes so, if it has been tapped, by reason of degenerative change. Practically, therefore, an ovarian cystoma, subjected to no surgical interference except tapping, produces death by structural degeneration of its tissues.

These parasitic growths, as Mr. Wells terms them, differ in their histological character from the normal tissues in which they take their origin, and the deviation becomes more and more marked as their development progresses. Like most other adventitious growths, their vitality is feeble and their tenure of life, as a rule, is short.

In any given case we cannot predict when this process of degeneration will begin, and oftentimes when it has advanced very far towards the decay and death of some tissue of the cystoma it gives no sign by which it can be recognized, and we then have a dead tissue in the living body, diffusing a subtle and deadly poison through the whole organism. In many instances the progress of this septicæmia towards a fatal result is rapid, in others slow, as in the case just described.

Again, our first warning of cystic degeneration may come from some accident; a not uncommon one being rupture of the cyst walls, and the escape of its contents into the abdominal cavity, producing a very fatal form of peritonitis.

The following case is an illustration of an accident more rare than cyst rupture, and due to degenerative change affecting the pedicle: —

Mrs. S., Lowell, age forty-five; operation June 19, 1881. She had always been in good health until October, 1880, when after a cessation of the menses for three months she noticed an enlargement of the abdomen. The patient regarded herself as pregnant, in which opinion she was confirmed by medical advice until June 12th, when a careful examination revealed unmistakably the presence of an ovarian tumor. It was at this time that the operation should have been performed, yet as her general health was seemingly unimpaired, the removal of the tumor was delayed. Two days after Mrs. S. had a severe attack of pain localized in the right lumbar region.

The pain speedily subsided, but similar attacks followed at intervals of a day or two, and when they occurred the patient became pale and the extremities cold. Meanwhile the tumor very sensibly increased in size, and at the same time the patient's strength rapidly failed. The tumor was removed one week from the time of the first examination. When the cyst was tapped with a "Wells' trocar," a large quantity of clotted blood passed through the tube. Very soon when the withdrawal of liquid had removed all tension from the cyst walls, and as I was drawing the sac out through the incision, there appeared a stream of fresh blood through the tube. The clamp was at once applied to the pedicle and further hæmorrhage stopped. Its application required only a few seconds, still a large quantity of blood must have been lost.

The cause of the attacks of pain and the accompanying pallor, with coldness of the hands and feet, was now apparent. The internal portion of the pedicle had become broken down by degenerative changes, and one or more of the large blood-vessels had been opened, thus pouring blood into the sac from time to time as much as the distensibility of its walls would allow. It was from this cause that the tumor had increased so rapidly in size and the final great hæmorrhage, added to those preceding, had so exsanguinated the patient as to prove fatal just as the operation was being completed.

In June, 1881, at the request of her attending physician, I saw Mrs. ——, of Milford, Mass. She had an ovarian cystoma of recent development that extended two or three inches above the umbilicus, but not distending markedly the abdominal walls. Her general health had, seemingly, been unaffected by the growth of the tumor. Therefore, in deference to the generally accepted rule of practice that ovariotomy should not be resorted to while the patient is in vigorous health, the removal of the tumor was deferred. Some three months after the sac ruptured, and Mrs. —— died in seventy-two hours of peritonitis.

All the perils of ruptured cysts, bleeding pedicles, and septicæmias from broken-down and dying tissues of the tumor can be averted by an early operation.

And does not the avoidance of all these dangers far exceed in the welfare of the patient every possible advantage, if there be any, that can come to her by delay? In short, is not an early interference, while the tumor is both small and recent, the wisest and most prudent course?

Mr. Lawson Tait, in his work upon Diseases of the Ovaries,[1] presents a very strong argument in favor of the early removal of ovarian tumors, based upon their pathological character and manifest malignant tendency. After describing the great variety of epithelial cells found in cyst cavities, their mode of development, and their varied departures from the normal epithelial cell, he concludes that most ovarian tumors have, at least, an element of malignancy, and that their prompt

[1] Page 144 et seq.

removal is urgently demanded as a protection against the systemic infection of the patient with cancer.

These conclusions of Mr. Tait are corroborated by the after-history of Mr. Wells's one thousand cases. A large proportion of the whole number were living at the time of the report, yet of those who had died thirty-three had died of cancer, and if a complete history of all these cases could have been obtained this number would probably have been largely augmented. The fact that so many patients at one time in their life develop an ovarian tumor, at another cancer, or, as quite often occurs, a uterine fibroma, seems to indicate that these growths are simply different manifestations of one and the same abnormality of the general system.

In this connection the case of Mrs. J., of Connecticut, from whom an ovarian tumor was removed June 12, 1879, is interesting. Age forty-five. No children. When she reached the age of thirty-nine her menstrual periods gradually became more frequent and the flow more profuse, until for the past six months there has been an almost continuous sanguineous discharge from the vagina. Last July, that is, eleven months before the operation, she noticed a tumor in the right iliac region, which was painless, but had steadily enlarged. June 5th I made the first examination. Her general health was not greatly impaired, and that mainly by the menorrhagia and metrorrhagia of the past year or two. The tumor of the ovary did not greatly distend the abdominal walls. Fluctuation was distinct over the upper portion, and its boundaries could be distinctly traced. In the supra-pubic region a hard ovoid body could be felt, which was the fibroid uterus, uniformly enlarged to about six times its normal size. The ovarian tumor was of the dermoid variety, weighed about fifteen pounds, and was free from adhesions. The patient made a rapid recovery. The menorrhagia ceased, and the fibroid afterwards did not increase in size.

Mrs. J. remained in good health for about two years, but subsequently died of cancer of the uterus. So in this case we had the simultaneous existence of an ovarian tumor and a uterine fibroma, and subsequently a cancer.

Summarizing my own experience, there have been eight cases in which I operated before the general health had been visibly impaired, and when the tumors had not reached an advanced stage of development. Of these all but one recovered, and the death of the that one was due to an accident. This patient's general condition had not apparently been affected. A small cystoma, without adhesions or other complications, was removed. After the operation she complained very bitterly of a terrible prickling sensation throughout the abdominal cavity, which could hardly be controlled by large doses of morphine. Ten hours later bloody serum, the blood tinge being slight, began to exude in large quantities from the wound. This continued for about twenty-four hours. She died of exhaustion on the third day. I am certain that, by some mistake, a solution of carbolic acid many times too strong was used in sponging the abdominal cavity. The severe prickling sensation was characteristic of carbolic irritation. Also the pouring out of a large amount of serum would indicate that the peritonæum had been exposed to an irritant of some kind, and this probably was the carbolic acid. Certainly nothing in the previous condition of the patient, or in the operation itself, could account for the speedily fatal result.

Of the other cases I will give briefly the history of one, one entirely devoid of interest, except as illustrating the usual absence of any difficulties in the way of ovariotomy when the operation is performed early; and also as an example of the safe and rapid recovery that, with few exceptions, follows when an ovarian cystoma has been removed at an early stage of its growth: —

January 24, 1883. Mrs. H., White River, Vt., age twenty-four. Two children. After the birth of the youngest, two years ago, noticed a small tumor in the left iliac region, which had grown slowly but steadily, until it now extended several inches above the umbilicus. Before coming to me she had consulted several surgeons, who had told her that she had an ovarian tumor, but advised against an operation at that time because her general health was not affected, and because she was not suffering any great inconvenience. A few days later I saw the patient, and urged an immediate operation, because the tumor was not large, and was probably non-adherent, and because her general health had not been harmed by it.

She consented, and I removed an oligocystic tumor weighing about fifteen pounds. There were no adhesions, and the operation was attended with no difficulty. I wish especially to call attention to some of the unfavorable circumstances surrounding this case.

She came from her home in the country to the city, and occupied a small room in a crowded tenement house. Added to this was considerable mental disturbance lest she had been unwise in consenting to an operation, contrary to the medical advice she had received. Great anxiety, also, on account of her straitened circumstances contributed to produce a mental depression very unfavorable for ovariotomy. In a word, both her surroundings and her mental condition were as unfortunate as could well be conceived, but her physical condition for the operation was perfect. Without enumerating the tedious details of temperature and pulse from day to day, it is sufficient to say that the highest temperature reached was 101° F. upon the fourth day, and that this steadily declined, and became normal upon the tenth day, at which time she had practically recovered from the operation.

The ovariotomist, unfortunately, cannot elect his own time for the operation in a majority of cases, for many of them do not come under his care before the disease has reached an advanced stage, and before complications have occurred from adhesions, degenerative changes, or septic infection of the system, so grave as to render ovariotomy formidable and often unsuccessful. I have presented these reasons for early removal, however, believing, as I do, that ovariotomy will take a long stride in advance of its former success when it shall become the general and settled rule of practice to remove ovarian tumors as soon as their diagnosis can be clearly determined.

— A table prepared by the New Jersey State Board of Health shows the rate of mortality to be 16.32 per 1000 persons at Plainfield, and 26.98 at the town of Union. The population of the latter place, however, is only 5094. These are the extremes of sixteen towns. The death-rate for Jersey City, with 120,732 inhabitants, is given at 24.27, and for Newark, with 136,508 inhabitants, at 23.52.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

MARCH 24, 1884. The President, DR. CHARLES D. HOMANS, in the chair.

ROUND-CELLED SARCOMA OF THE MEATUS AUDITORIUS.

DR. J. ORNE GREEN exhibited a photograph from a patient twenty-three years old with the following history: There had been otorrhœa since scarlet fever six years before, and when first seen by Dr. Green the meatus was filled with a growth like a polypus, fungous granulations covered the seat of an abscess which had burst over the mastoid, which as well as the petrous bone proved to be carious, and the patient was weak. After four or five days of supporting treatment there were a chill and fever. In consequence, he was etherized, an incision made into the bone, freeing grumous pus, and a drainage tube inserted, the growth being also removed. The septic symptoms now disappeared, but the progress of the growth was rapid, nodules appearing below and in front of the ear. Later, brain symptoms developed with œdema of the eyelid and cheek, and lastly coma that existed for three weeks previous to death, which occurred six months after first coming under observation. No autopsy was allowed, but the piece removed at the beginning was examined by Dr. Gannett and found to be round-celled sarcoma.

PECULIAR CASE OF VALVULAR DISEASE OF THE HEART.

DR. W. P. BOLLES presented the specimen, the history of which had been one of valvular disease with enlargement, dyspnœa, jaundice, and death. The cardiac sounds were those of mitral insufficiency, a loud and distinct murmur accompanying the systole, while there was no direct murmur. On autopsy, however, there was found to be not only insufficiency, but also a high degree of stenosis, only the tip of the finger being admitted. A large old ante-mortem clot was worn smooth toward the centre of the auricle, and was adherent at all other places. Remains of emboli existed in the lungs and a suppurating cavity in the right lung corresponded with a history of pneumonia ten weeks before. It was interesting that the patient had never had rheumatism, and that while there were no cardiac symptoms until within one or two years, yet that she had been told, thirty years ago, by the late Dr. Reynolds, Sr., that she had a very bad heart.

DR. F. C. SHATTUCK remarked that this case is an illustration of the fact recognized by all recent writers on heart disease, that valvular disease — and especially mitral stenosis — may be unattended by murmur. The presystolic murmur, when present, is very characteristic, but it is not infrequently absent and sometimes comes and goes. In the advanced stages of cardiac failure the auricular contractions are often so feeble that they cannot throw the valve into vibrations sufficiently forcible to give rise to any audible murmur.

DR. H. I. BOWDITCH thought that such histories should make us chary of needlessly giving a diagnosis and thus causing useless alarm.

DR. FRANCIS MINOT remarked that possibly the knowledge may have prolonged her life.

DR. O. W. DOE showed a

COLLECTION OF THREE GALL-STONES

passed by a lady, fifty-five years of age, at intervals of a week. The smallest measured one and two tenths centimetres in its broadest diameter; the largest, one and four tenths. Each attack lasted about two hours, the pain being chiefly referred to the right hypochondriac region, and was followed by jaundice, which disappeared in from two to three days. The patient had been leading an unusually sedentary life for two years past.

The treatment was by ether, morphia subcutaneously, and hot applications to the epigastric and hypochondriac regions.

DR. CHARLES W. WILLIAMS reported a

CASE OF FOREIGN BODY IN ORBIT.

T. W., seven years old, while playing with some boys was hit over the left eye with a stick. There was a cut through the skin about one quarter of an inch long; it was a little to the inner side of the eye, and a quarter of an inch below the eyebrow. The nurse reported that it bled freely, but nothing more than water dressings were applied, as it was supposed to be only a black eye. When seen, five days after the accident, the eye was closed, the upper lid swelled even with the eyebrow. The cut in the skin was still open, and discharging a small amount of pus. A probe could be passed backward about half an inch, but no foreign body could be detected with certainty. There was neither redness nor extravasation of blood under the ocular or palpebral conjunctiva, and the vision was nearly normal, $\frac{8}{10}$, and corresponded with that in the other eye. Poultices were applied for two days. On a second examination with a probe a suspicion of grittiness was detected. The child was etherized, and first some small splinters of wood, then a roundish piece, about half an inch long by quarter of an inch thick, was removed from the bottom of a pocket, extending about half an inch directly backward from the cut to a point between the orbital roof and the sclera, and just to the inner side of the superior rectus muscle. On questioning the boys more carefully it seemed that the stick which hit the eye had been used as a trellis for plants, and the sharp end which was buried in the ground had penetrated the lid. This partly decayed wood, absorbing the blood and moisture from the orbital tissue, had become so soft that a probe failed to detect its presence with certainty until it grated against a bit of sand which was attached to the wood. After the removal of the wood the wound was poulticed for two days; the discharge had then ceased, and the swelling of the lid was nearly gone; vision as before, $\frac{8}{10}$. At no time did the child complain of any pain in or about the eye. He ate and slept well, and enjoyed his play.

DR. H. L. BURRELL showed a

TUMOR OF THE UTERUS.

The patient was fifty-nine years old, and had not menstruated for twelve years. Four years after the cessation a small lump appeared in the right inguinal region. In a year there were three or four smart uterine hæmorrhages. There was dyspnœa, probably from bronchitis, but no pain. Dr. Burrell had made an exploratory incision after death to see if an operation would have been feasible, and found that it must have been very difficult. A cyst on the right side was bound to the right iliac vessels. Both the round ligaments were very tense, and held the uterus fixed as if bound to the rectum or spine. There proved to be no

such adhesions. An examination with the probe two months ago had given the uterus an apparent depth of two inches. This was accounted for by the obliteration of the internal os, beyond which was a cavity four inches deep. The cervix was obliterated, and it was hard to say where the vagina ended and the uterus began, thus increasing the danger of wounding the ureters had removal taken place during life. There was no peritonitis, the cause of death being bronchitis.

Dr. Minot inquired if it is not rare for uterine fibroids to develop after cessation of the catamenia.

Dr. C. D. Homans mentioned some cases of large fibroids that stopped growing before that time.

Dr. R. H. Fitz said that the uterine fibroid commonly becomes calcified in advanced life.

AMPUTATION IN SENILE GANGRENE.

Dr. J. C. Warren presented a specimen. A short time ago Mr. Jonathan Hutchinson had read a paper before the Medico-Chirurgical Society advocating amputation above the *expected* line of demarkation in cases of senile gangrene of the toe, that is, he would amputate above the knee-joint, that being about where the disease would probably stop if let alone. Other papers have been called out by this of Mr. Hutchinson's. Dr. Warren's patient had the typical foot and the senile appearance, but claimed to be only fifty-one years old, and there was an indefinite history of injury. Dr. Warren had amputated at the point of election two days ago, and there is as yet no return of the disease. The skin was good to the malleoli, and the skin flap was taken from a convenient height. The anterior tibial artery was found to be plugged, but the posterior tibial was sound. The results of waiting have been so poor that it is interesting to see what success will follow a change of treatment.

Dr. Gannett asked Dr. Warren whether there had been any injury to the foot previous to the appearance of the gangrene, and further called attention to the fact that the condition of the vessels was favorable to the development of gangrene, provided an inflammatory process were set up by any injury or other cause.

Dr. Warren said that there was a vague history of inflammation, of freezing, and of being stepped on by a horse.

Dr. F. W. Draper then read the regular paper on

RUPTURE OF THE LIVER.[1]

Dr. Fitz said that two possibilities, in addition to those suggested by the reader, occurred to him in explanation of the origin of the ruptured liver in the case first reported. On the one hand it was conceivable that the child had been crushed between the tilting tank and the ground, supposing there was sufficient space between the two for the admission of the body; on the other, that his playmates had fallen upon him while stretched across the edge of the tank.

Either of these alternatives might account for certain of the external wounds as well as the internal injuries. Even if the first were impossible in consequence of the relation of the tank to the ground the latter was still tenable, and could hardly be refuted, even if denied by the children. The youth of the witnesses would, of necessity, materially qualify their evidence on this point.

The main argument against this theory, based upon the length of time and occupation of the boy in the interval between the play and the occurrence of serious symptoms would be controlled by the history of a case reported before this Society by the late Dr. J. B. S. Jackson, and recorded by him in his Catalogue of the Cabinet of the Society somewhat as follows: —

A girl, between four and five years of age, was run over by a baker's cart on Monday morning. Though feeling faint during the forenoon, and kept upon the bed, she was down stairs in the afternoon, on the floor with her playthings. On Tuesday she was out doors, in front of the house, and on the following day she went to the Common, at some distance from her home, and played about and rolled upon the grass. While returning distress at the stomach was complained of, which continued through the night, and was at times urgent; nausea and vomiting with cold perspiration were also present. On Thursday she was much relieved, but was confined to her bed, where she remained till her death, on Saturday, four days after the accident. The prominent symptoms during the last two days were frequent faint turns and progressive loss of strength.

A rupture of the liver was found extending nearly through the substance of the right lobe, and causing the separation of a mass equal to two inches and a half in diameter or more. The peritonæum was separated from almost the whole anterior surface of the right lobe by a thick layer of clotted and liquid blood. The peritoneal cavity contained about half a pint of blood, and blood was found in the pleural cavity with some ecchymosis.

Dr. Draper said that there was not enough space for the child to have been crushed between the tank and the ground.

CHRONIC RETENTION OF URINE.

Dr. Bowditch reported the case, which he had sent to an expert, from whom he had received a letter which was of interest. The patient had been getting up at night two or three times for two or three years. Several specimens of his urine contained from one and a half to two inches of pus in a six-ounce glass. This was two months ago, while now he can go to bed at eight and stay there until morning, and the urine is clear when passed, although it becomes cloudy at the bottom of the glass on standing. From the history it was evident that the bladder had not been perfectly emptied for two or three years. It rose above the pubes, and could be felt by the finger in the rectum. As the patient lived out of town he came into the city to a hotel, and there was astonished by the surgeon passing a catheter immediately after micturition and getting over two pints more urine without emptying the bladder. Aside from the use of the catheter the treatment has been dilute hydrochloric acid as a tonic.

Dr. Samuel Cabot said that surgeons not uncommonly have ample evidence that a bladder has not been emptied for years.

SUFFOLK DISTRICT MEDICAL SOCIETY.[2]

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

THE MILK SUPPLY OF LARGE CITIES — *concluded.*

The leading principle with too many of the men engaged in the sale of milk in the city is to get trade, by any means possible, and build up a route to sell out.

[1] See page 339 of this number of the Journal.

[2] Concluded from page 325.

Such dealers have no pride in learning thoroughly the proper way to carry on the business; they do not care much what they sell or whether or not they make a legitimate profit if in the end they can sell out and come out even or a little ahead. The class of men who have the better portion of the trade, who have had experience in business, and money with which to carry it on, who want to sell a good article and make a fair profit, and who, if there were no ruinous competition, would not, from principle, take advantage of their customers, but would give every attention to their wants, only asking a fair return, are constantly harassed and annoyed and, as they term it, robbed by these so-called "pick ups."

Another trouble is found in the competition from stores. At the present price, forty cents per can at the car, a milkman pays 4.71 cents per quart for his milk. It is conceded that a milk-wagon cannot be run for less than two cents per quart by all having any knowledge at all of the business, and many close observers say two and one half. If we take the lowest figure the milk costs 6.71 cents at the consumer's door, or 7.21 cents if we take the higher. It is easy to imagine the feelings with which he would regard a card in a window, "pure milk, four cents per quart," when he may have one or more customers in the same block from whom he must get seven, and, if possible, eight cents per quart or not pay his bills.

That it would be an advantage to the business if the Board of Health would drive all storekeepers out of the business who are not willing to sell pure milk and sustain the price is clear. Whether the poor people who buy would be benefited by the advance in quality more than they would feel the advance in price is not so clear. At all events it is a fact beyond dispute that any man may, by a little inquiry, find out the character of the man from whom he proposes to buy, and need fear being cheated no more than he would in buying any other class of goods.

In reply to a question the same gentleman stated that the effect of feeding cows on ensilage was to produce a peculiar sweetish taste in the milk, which is not at all agreeable, and is also contained in the butter made from such milk.

In regard to the statement that a certain milk-producer is putting up milk at his farm in glass jars for delivery in Boston, the facts are as follows: I know the gentleman, and know the source of his milk. It is transported to Boston by rail, and always comes in ordinary tin milk cans. If he delivers it in Boston in glass jars it is put into jars after it reaches the city. It comes to Boston like all the rest of the milk.

DR. J. AYER asked the speaker, "Ought the citizens of Boston to receive milk as good as the farmers produce it, thirty miles in the country; or does the carriage, by cars or otherwise, injure its properties?' to which the reply was given that there is no reason why the milk when delivered at the door of the consumer should not be in every way equally as good as when it left the farm on which it was produced. The main source from which damage might be apprehended would be from too early collection before the temperature of the milk had been sufficiently lowered by cooling in water, or too high a temperature in transit in summer, or freezing in winter. These accidents are obviated by the cans being surrounded by ice as soon as they are placed in the car, or otherwise kept at the right temperature, which should, if possible, be maintained at 50° F.

Dr. Ayer also asked, "Is the milk injured by churning, or motion, in transportation? My impression has been that the carriage and disturbance were injurious."

The gentleman replied that the printed rules of the Milk Association, posted in the barn or on the premises of the farmer, requires every milk can to be full up to the stopper, so as to prevent all churning. It is also required that the cow's bag shall be washed or brushed before milking. The milk should be cooled in another building from that in which the milking is done, and should be kept in the stable no longer than absolutely necessary after being drawn from the cow. The cars used for the transportation of milk are placed on regular passenger trucks and ride as easy as passenger cars. The motion of the car does not affect the milk at all. The wagons used for delivering the milk after it arrives in Boston are made for that especial purpose, and are set on two springs, and have a peculiar rolling motion which does not shake the milk. With all the care which can be exercised the milk is injured far more in being carried about for distribution in the milk wagons after it arrives in Boston than in being carried thirty or even forty miles by rail. Even if delivered in the best possible condition, careless treatment after it is in the consumer's house will spoil it in half an hour. Often it is placed where the temperature is raised to 60° F. or 70° F., when it at once sours, and the consumer blames the milkman.

DR. BARNES asked if it is possible to preserve milk in good condition for seventy-two hours; to which it was replied that this is perfectly possible. A certain lot of milk was on one occasion missent, and for nearly a week was lost. When recovered the milk was in perfectly good condition in every way. The firm which the speaker represents, not milk contractors but milk dealers, supplies the line of steamships plying between Boston and Norfolk, VA. These steamers always take milk here for the round trip, as no supply can be depended upon in Norfolk. On their arrival in Boston after the trip to Norfolk the milk which is left over is always found fresh and sweet.

DR. BUCKINGHAM stated that the quality of milk is often materially affected by circumstances entirely independent of the age of the milk or its transportation. As a matter of fact the inside of milk cans is sometimes foul, and the corks sour. One way of preventing this would be the use of glass, as proposed by Dr. Morris. By this system, however, one would get the milk of only one cow in a glass, which would be objectionable. The expense of this course, which might be important, is a matter of which he knew nothing.

Condensed milk having been brought into the discussion, he thought that the Swiss condensed milk, the only one of which he has knowledge, contains a great deal too much sugar to be a fit food for babies or invalids.

In answer to a question about the opinion of the Society as to the value of one cow's milk for babies, Dr. Buckingham said that the theory in giving one cow's milk is to avoid variation in the quality of the food. Milk from one cow does, however, vary somewhat from day to day, and it is probable that the mixture of the milk of several cows will vary less than that of any one of them. This he knew to be the opinion of several members of the Society. It is also the view that is gaining ground in Germany.

DR. HARLOW asked how many of the farmers prob-

ably adulterate milk to any extent or in any way before sending it to the city.

In reply it was stated that such a thing was very rarely done. Probably not over two per cent. of the farmers attempt to tamper with milk in any way. It would be fatal to their interests to do so, as the milk from such dairies would not be accepted by the contractor nor allowed to go out. The principal adulterators are a set of dealers who supply milk for a minimum price, and in this way build up a large trade in order to sell out. A well established milk route has a considerable commercial value. Unscrupulous men often build up a business in this way, and then sell the route to other parties.

DR. E. T. EASTMAN stated that housekeepers often accuse the milkman unjustly. In a case known to him the servant was in the habit of taking off a portion from the top of the can, and supplying the deficiency with water, and the housekeeper complained that the milkman was delivering adulterated milk. This source of deterioration in the milk supplied to families is often forgotten, and the milkman is charged with adulteration.

In reply to the question how the supply of *cream* is obtained which is sold for table use at an advanced price, it was stated that the surplus of each day's milk was passed through a machine called the "separator," which removes the cream and leaves a pure skimmed milk which is sold to bakers, to families for domestic use, and for feeding to pigs. Another method of obtaining cream is also regularly followed. Each day cans of milk fresh from the dairy are poured into large receivers which are surrounded with ice, and are left undisturbed for twenty-two hours. At the end of this time it is skimmed with a conical skimmer, and about ten per cent. of cream obtained, which is the average amount of good milk.

DR. EDES asked how the milkmen are sure of the quality of milk which they supply to their customers.

The reply was made that the quality of the milk is examined each day, and sometimes a favorite dairy will be found unfit for use, and will be rejected, and a supply from some other source obtained in its place. Suspicion was recently aroused in respect to a dairy, and on "setting" the milk it was found to yield only six per cent. of cream. The milk from a neighboring dairy was also "set," and yielded fifteen per cent. of cream. Consumers would hardly have been satisfied if this milk had been delivered to them in glass jars sealed in the country, though they could not then accuse the milkman of tampering with it. Often the milk from a reliable dairy will be found sour, and, of course, must be rejected, and used for butter. The quality of the milk also depends on the food of the cow. Brewers' grains are not considered an unhealthy nutriment for cows, but the milk is thin and white.

In reply to a question by Dr. White as to how many cows are represented in one can of milk, it was stated that rarely would one can contain the milk of more than two cows. The farmer milks the cows in succession, and as soon as each cow is milked the milk is strained into the cans, which are successively filled and at once placed in water to cool. After arriving in the city the milk is mixed, and is then drawn into the service cans for distribution.

DR. BUNDY said that he had witnessed the operation of "mixing," and had seen water added in considerable quantities previous to filling the service cans for families.

DR. DAVENPORT asked if the milkmen consider the required standard too high? The reply was made that the milkmen in general know nothing about the standard, and but little about milk regulations or milk laws, but studiously endeavor to avoid the penalties.

The statement has been made that the cream sold by milkmen was obtained from creameries, as it was impossible to obtain good cream from the tops of their cans. Mr. Abbott stated that in his earlier experience as a milkman he found no difficulty in getting a large share of the cream, the motion of the cars was so slight and the sudden cooling with ice caused the cream to rise so that most of the cans have a heavy cream on them when reaching the city. Those that did not could be iced and kept over, as nearly every milkman carries a surplus.

Dr. Barnes stated that the Milk Inspector, in speaking of the arduous duties of his office, said that if the city would furnish him with a team, he could accomplish much more. Mr. Abbott produced the Milk Inspector's report for the year ending March 21, 1883, showing that the number of visits made and samples inspected was 1153, or, allowing three hundred working days, would be less than four per day, which Mr. Abbott thought, with our system of horse cars and good sidewalks, would not be a very laborious work for an able-bodied man. Our Milk Inspector receives $1800 per year, and has a clerk at $500, making $2300; divide this by 1153 and it will be seen that it costs the city of Boston nearly two dollars apiece for every sample of milk inspected. To this must be added $140 for analysis in fourteen cases, as a result of which thirteen persons were prosecuted and twelve convicted. In looking further we find that at that date eight hundred and sixty storekeepers or retail dealers have been licensed; is it possible that only that number of storekeepers in Boston have heard that there is a milk law! Such being the case, it is not to be wondered that the milk dealers speak with contempt of the Milk Inspector and his office.

DR. MARCY remarked that we should not forget that in the plan for furnishing milk as described and practiced by Dr. Morris all chances of contamination of the milk from dirty vessels, all manipulation by middlemen, and all abstraction by servants after the milk has been delivered, is prevented. The most of the objections urged against milk as now supplied would at once be removed. There seems to be no good reason why a plan which can be carried on in Philadelphia to the satisfaction of the consumer and at a fair profit to the projector might not work equally well in Boston.

DR. BLODGETT remarked that a part of the responsibility for adulterated milk undoubtedly rests upon the people consuming it. Very few people in the city know how pure milk looks, and expect a rich yellow milk at all times of the year and under all circumstances. Cows' milk is not all yellow, nor is it always yellow. The farmers endeavor to secure cows which will yield large amounts of milk, but the color is often very pale. The farmer gets three and a quarter cents a quart for milk, and he tries to get the largest possible amount from the cows. A farmer cannot furnish Jersey milk for three and a quarter cents per quart. If people demand a quality in milk which does not belong to it there are no doubt many milkmen who are willing to furnish it of any desired color; and thus the consumer unconsciously encourages adulteration.

Dr. Blodgett further stated that he had made some attempts to ascertain the methods employed in the handling of milk, and that he had seen and heard much which was new and interesting to him, and was particularly struck by the courtesy and freedom with which he had invariably been allowed to make any investigations or pursue any inquiries he thought desirable. He thought that the members of the Section would be favorably impressed with the care and scrupulous attention to cleanliness which are observed in all the operations to which milk is subjected in transit and until it is delivered to the milkmen for distribution. Of course all this does not in any way prevent these persons from adulterating it before they deliver it. But there seems to be no systematic adulteration, as we have too often been led to suppose. A visit to the large milk depots is calculated to inspire a greater degree of confidence in the quality of the milk supply than exists at present in the minds of the majority of consumers.

DR. BOWDITCH presented the following resolution:

Resolved, That the chairman be requested to appoint a committee of five, whose duty shall be to report upon the whole subject of the providing of milk for Boston, and suggest the means for obtaining it pure for the citizens.

The resolution was unanimously passed, and in accordance with its requirements the following committee was appointed: Dr. H. O. Marcy, chairman, Dr. A. N. Blodgett, Dr. E. W. Cushing, Dr. H. J. Barnes, Mr. L. F. Abbott.

On motion of Dr. Blodgett the thanks of the Section were tendered to the members of the Milk Producers Association for the important information which they have placed at the disposal of the Section in regard to the source, treatment, and adulterations of the milk supplied to the citizens of Boston.

THE SPAYING OF COWS.[1]

The second paper of the evening was entitled The Milk Supply of Boston, and the Benefit to be Derived from the Spaying of Cows, by MR. LLOYD F. ABBOTT, a former milk producer and dealer.

The paper was read by DR. G. E. MECUEN, who described the process as follows: —

As regards the spaying of cows there is little danger if properly done, and the mortality should not exceed one per cent.

Operation. An incision is made in the flank of the cow, left side preferred, as being handier for the operator, about four inches long, through the skin, then the muscles and fascia are cut, and the peritonæum divided, using the finger as a director. The hand is then introduced and carried upwards and backwards until the uterus is reached, when, by following the horn outwards, we find the ovary, and remove it with the thumb-nail or écraseur; this can be held by the two last fingers of the hand, and search made for the other ovary, and when found removed in the same manner: when the arm and hand are withdrawn and the wound stitched by the interrupted suture passing through all the tissues except the peritonæum. During the whole operation a twenty per cent. solution of carbolic acid is used with the steam atomizer, the hands and side of the animal being thoroughly washed in the same solution. The hair should be clipped from the flank before incision. The pain from the operation is slight, the cow struggling only during the cutting of the skin, which does not take more than two or three seconds, and again during the sewing at the end of the operation. The latter is the most difficult part of the whole operation, as cow-hide in its undressed condition is very tough. While the arm and hand are within the belly of the cow the animal really seems to enjoy it, acting as a dog does when one rubs his head.

The advantages from this operation are set forth in Mr. Abbott's paper, and I will merely call special attention to a few of the most important. First, the quantity at a milking is increased, and a great increase takes place in the yearly yield of a cow. As to the milk itself, its quality is improved, the fat and sugar are increased, and although I did not keep a record of the examination of specimens of milk from these spayed cows before and after the operations (examining only for my own information, not expecting to have occasion to refer to figures again), I think that, judging from the large number of milk analyses that have been made, I would be supported in claiming that where fat and sugar are increased casein is decreased. Now this milk will be of the same quality day after day, unless the cow has some acute disease, provided she is properly fed and attended to. If over-fed she is apt to fatten, and fall off in the quantity of milk, as a spayed cow, like any animal deprived of the reproductive organs, is quite easy to fatten, thus adding to her value as beef. By this operation all the danger of abortion, post-partum hæmorrhage, accidents during heat, while with the bull, and calving are eliminated. The bad breeding and small cows may be made good milk-producers, and easily fattened for market. But I suppose the greatest advantage of all is the escape of the periodical change occurring in the milk of the unspayed cow every three or four weeks, and lasting a day or two.

Cows are extensively spayed in Texas when young, simply for the purpose of making good beef cattle, the butchers at Brighton abattoir being well aware of this fact. Before operating I visited the abattoir several times for the purpose of becoming acquainted with the anatomy of the cow, and on inquiry at the various slaughter-houses "if they were going to kill a cow" would receive the answer "yes." On the cow being opened I would find only a rudimentary uterus and no ovaries. After examining several I asked the butcher "where the ovaries were." He informed me that they had been removed when the animal was young, and showed me the scar in the hide. The way he had of finding it was that the tissues were all fused together, it requiring care to separate the hide, and the use of the knife, while only his hand was necessary in other parts. It seems to me that this is proof that the operation is a safe one, for the stock-raiser would not run the risk of losing young cattle just for the sake of increasing the weight of a few.

There are two facts which are of interest to us as physicians, namely, first, for two or three days after the operation the flow of milk is reduced to almost nothing. I suppose this is due to the congestion of the broad ligament and tubes. Second, in one case operated on, miscarriage followed ten days after the operation, the calf being macerated so that the hair and skin readily peeled off.

I was present at the spaying of five cows by a veterinary surgeon in which the operation was done through an incision in the posterior and lateral side of the vagina, the surgeon using a speculum to fix the

[1] See Medical and Surgical Journal, No. 14, page 317.

uterus and distend the vagina, then cutting and introducing the hand with an écraseur, and having engaged the ovary removing it and the other through the same opening, the result being left to nature. From the slight observation I have had as yet I would favor the flank operation.

DR. JAMES R. CHADWICK said: I was called upon by Mr. Abbott to operate for him in one of his early cases. I did not find that my previous experience with the human species was of any material aid in the operation upon cows. I can testify that the operation appeared to give the cow but little pain, and only during the incision through the integument and its subsequent suture. The cow seemed to be chiefly affected by alarm at having her head and legs securely bound with ropes, but this no more than equaled our fear lest she should break loose during the operation and strike out. I was surprised on making the incision through the flank to find all further progress apparently barred by one of the stomachs; the hand was, however, easily passed between this and the abdominal wall into the pelvis where the two ovaries were successively seized and torn off by the thumb-nail. But slight hæmorrhage resulted. The only real difficulty of the operation was in perforating the hide with a needle to close the integumental incision. This is readily appreciated by considering the difficulty that would be experienced in trying to sew up a rent in a cowhide boot. Colonel Waring assured me last year that the effect of spaying cows had been of great benefit in promoting lactation, and that the mortality was no greater than five or six deaths in a thousand operations.

DR. GILBERT, of Dorchester, who has also witnessed the operation, said that the cow seemed to suffer no great pain excepting when the outside skin was being cut and when the stitches were inserted at the close of the operation. The risk and discomfort of ether are much greater than the pain of the operation.

DR. MECUEN stated that one cow from which the ovaries were removed has produced milk continuously for eleven years, and in this entire period has fallen off only three pints. Dr. Brush claims that the amount of milk will remain the same during the life of the animal. The carbolic spray was employed in all cases except the first one. On opening the peritonæum the air rushes into the abdominal cavity, but seems to produce no injurious effects. Both ovaries are removed at once. No dressing other than some substance to protect from flies, etc., is necessary, and the wound is entirely healed by first intention in about a week. The animal should be kept on low diet for a day or two, but in three or four days is allowed to run in the pasture as usual. In one case the cow was five months pregnant. The operation produced a miscarriage at the end of ten days. The fruit was macerated. After spaying, the only condition which will cause the quantity or quality of the milk to undergo variation is sickness of the animal.

DR. E. W. CUSHING stated that there is always an infant in his house. He has used the milk from a spayed cow for more than a year and finds it to be a good product and of uniform quality. New milk (after calving) is not good for children, and the milk during menstruation is not wholesome for an infant. Cows and women are much alike in this respect. The milk taken from a pregnant cow is unwholesome for a delicate person, and no mother thinks of nursing her child after she has again become with child. Milk as we obtain it is often neither natural nor healthy, for no animal in a natural condition gives milk while she is carrying her young.

On motion of DR. MARCY a vote of thanks was tendered Mr. Abbott for his description of a safe operation whereby the quality of milk supply may be materially improved and its quantity rendered constant for many years.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

AT a stated meeting of the Society, held March 24th, DR. H. KNAPP read a paper entitled Blindness from Thrombosis of the Retinal Blood-vessels in Facial Erysipelas, with Illustrations, which was discussed by DRS. LORING, HOLCOMBE, and POOLEY.

THE INCORPORATION OF THE SCHOOL OF MIDWIFERY AND THE LICENSING OF GRADUATES IN MIDWIFERY DISAPPROVED.

DR. W. M. CHAMBERLAIN, chairman of the committee appointed at the last meeting to examine and report on the act to incorporate a college of midwifery and the act to regulate the practice of midwifery, presented the following majority report: —

To the Medical Society of the County of New York: Your committee, having carefully considered a draft of An Act to Incorporate a College of Midwifery, also a draft of An Act to Regulate the Practice of Midwifery, and having heard the arguments of the promoters of these acts, are of the opinion that it is not expedient for this Society to indorse or support the said acts.

The question of the conditions under which others than registered physicians shall practice midwifery seems to be an important and difficult one, and in our opinion might properly be referred to a special committee, or to the Comitia Minora, for examination and report.

(Signed)
W. M. CHAMBERLAIN, M. D.,
EDWARD L. PARTRIDGE, M. D.,
ARTHUR M. JACOBUS, M. D.,
CHARLES CARROLL LEE, M. D.

A minority report, as follows, was presented by DR. A. W. WARDEN.

Medical Society of the County of New York, S. O. Vander Poel, M. D., President, W. M. Carpenter, M. D., Secretary: —

The undersigned, a part of your committee appointed to investigate and report to the Medical Society of the County of New York concerning two acts proposed for State legislation, presented to the Medical Society of the County of New York for approval by the promoters of the proposed New York Maternity and School of Midwifery, reports as follows: —

First, In regard to the proposed New York Maternity and School of Midwifery, your committee recommend that the Medical Society of the County of New York *do not indorse* or commend the incorporation of such an institution, because it is not conducive to the elevation of the medical profession and the good of the community.

Secondly, In regard to the proposed act in relation to the practice of midwifery in the State of New York, your committee find such proposed law to be not advisable, and counsel the Medical Society of the County of New York, in the interest of maintaining a high standard of qualification for the practice of midwifery

and all branches of the profession of medicine, and in the interests of the people of the State of New York, that it *do not approve* any State legislation giving the right to practice midwifery, or any branch of the profession of medicine, to persons other than qualified and registered (male or female) physicians.

(Signed.) A. W. WARDEN, M. D.

After considerable discussion the minority report, on motion of DR. E. C. HARWOOD, was adopted.

COLLECTIVE INVESTIGATION OF DISEASE.

On motion of DR. DAVID WEBSTER, chairman of the committee on collective investigation of disease, who reported that the histories of about fifty cases of intestinal obstruction had been sent in, and that their consideration would require more time than could be given to the matter on this occasion, a special meeting for this purpose was appointed for April 7th.

Medical and Surgical Journal.

THURSDAY, APRIL 10, 1884.

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INSANITY AND THE LAW.

THE recent sentence to death, in England, of two evidently insane murderers, William Gouldstone and James Coles, for clearly irresponsible acts, and the repeated escape on the ground of insanity, in this country, of sane and responsible men, on trial for cold-blooded murder, of which Nutt is the last conspicuous case, have turned thoughts anew to the question of the responsibility of criminals and the definitions of insanity. Gouldstone and Coles were reprieved and sent to a criminal lunatic asylum, but Nutt is still at large, a free man, and an example to others of the ease with which murder may be committed and the laws defied. It has long been the opinion of leading medical authorities, of Krafft-Ebing, Bucknill, and Gray particularly, that the mental disease of the physician does not necessarily constitute irresponsibility under the law. Lord Bramwell, too, has ruled that insanity is strong but not conclusive evidence of innocence, and Lord Blackburn has stated that the jury must decide in each case whether the disease of the mind or the criminal will was the cause of the crime. In a recent lecture, published in the *British Medical Journal* of March 15th and March 22d, Dr. Bucknill's medico-legal definition of insanity is *incapacitating weakness or derangement of mind caused by disease*, meaning, in criminal cases, inability of abstaining from the criminal act, which would be expressed by Lord Bramwell's criterion, *Could he help it?* Dr. Bucknill suggests, as an amendment to the law of England, that *no act is a crime if the person who does it is at the time incapable of not doing it by reason of idiocy or of disease affecting his mind.*

Of course no ordinary jury is competent to pass upon such a question. Dr. Bucknill quotes Colonel Corkhill's opinion, given soon after the Guiteau trial, "that when a prisoner proposes to defend his crime on the ground of insanity a jury specially selected for their fitness should be chosen to try the special plea, and if the prisoner be found insane then he should be confined in an insane prison for a time commensurate with the character of the crime, and if the verdict of the jury be in favor of his sanity then the plea should not be allowed upon the trial."

With such definitions of insanity and irresponsibility, and such a procedure before the trial, it is probable that many of the differences between the doctors and the lawyers would be met, and that a medico-legal definition of insanity would be found broad enough to cover all cases, and flexible enough to admit of ready application to every one committing an act in violation of the laws. We should avoid, too, such disagreeable complications as occurred during the Guiteau trial, and make it harder for judges and juries to acquit of murder, on the ground of insanity, responsible men who do their killing under circumstances appealing to the sympathies of their community. In our country there is less danger of convicting an insane man than in England, but the danger is greater of allowing sane criminals to escape the penalty of their deeds by a false claim of irresponsibility. Throughout the world criminal jurisprudence follows slowly after the discoveries and advances in medical pathology, and the great advantage of Dr. Bucknill's position is that the law of the land may be administered without being changed every few years to adapt itself to more recent views regarding the nature and limitations of mental disease.

MODERN AND ANCIENT LEPROSY IN SYRIA.

THE intrinsic and historic interest connected with leprosy is such as to make it a fascinating field for research. The recent case at Salem, Mass., is fresh in the minds of our readers, in which the disease was imported from the Sandwich Islands. Descriptions of the leprous community on one of those islands have been frequently given us by travelers. Recently an interesting account has been published by Professor Lortet, dean of the Faculty of Medicine at Lyons, of the disease as observed by him in Syria. These papers may be found in the first few numbers of *Lyon Médical* for the current year. The picture presented is a most revolting one, but inasmuch as it shows the disease as it occurs among a people crowded together and entirely devoid of even that palliative treatment which medical knowledge is able to afford, it may perhaps be taken as a fair representation of that type of the disease which in the Middle Ages followed back the returning Crusaders and spread terror over so much of Europe.

It seems that in Syria leprosy is closely limited to

the southern parts bordering on the Egyptian confine, Neapolis on the north, and Joppa, Jerusalem, and Hebron on the south representing its topographical range. The nomadic Arabs on the shores of the Dead Sea are exempt. The total number of lepers in Syria is given as about two hundred. They are confined to certain cities, where they beg alms during the day and retire at night to their quarters and contribute their gains to a common fund. Until recently they had their "quarter" in Jerusalem, where they occupied a collection of huts made of reeds and mud, so low that it was necessary to crawl into them, and filled with all sorts of filth. Now they are removed outside the wall to a big one-story structure built on a spot partly cut out of the rock above the valley of the Kedron, where hygienically they are about as badly off as before. The several compartments all have their entrances looking against the face of the rock. These rooms are each thirteen feet by twenty-two, and serve each for shelter to a group of lepers, or a family if they are married. The only furniture in these rooms consists of two boxes, one for containing the poor food on which they subsist, the other the rotten rags with which they cover their putrefying sores. The floor is of bare earth with perhaps a few bits of old clothing that they have begged to sleep on. There is no fireplace, but two or three stones are put together when there is wood to burn, and the smoke, with the exception of what is deposited on the walls and roof, escapes through the door and window.

Of the aspects of the disease in its worst forms we have not space to speak in detail, nor would the description be especially novel to our readers. The reddish-purple tubercles on the face, shoulders, and extremities, particularly the posterior surface of the forearm, the inside of the thigh, and the front of the leg; the large yellowish spots which in milder cases replace the tubercles and have a similar distribution; the breaking down into ulcers of these first formations; the extensive areas of superficial anæsthesia; the contraction of the flexor muscles so that the hands cannot be opened, and the toes are drawn down upon the plantar surface of the foot; the ulceration and sloughing of the phalanges one by one, till the metatarsal and metacarpal bones are exposed, protruding from a bleeding, horribly fetid wound; finally, the gangrene attacking the face, the cornea, the ears, and the scalp, and eating its way into the bones of the nose and cranium, — these are among the salient features of the portrait drawn by M. Lortet as well as by other observers of the worst forms of the neglected leprosy of to-day. For the more complete details we refer the reader to the article cited.

The community on the banks of the Kedron is, we learn, governed by a sheik, himself a leper, for whom his subjects show the utmost submission and respect. Lepers can marry only among themselves. Women, being less frequently the victims of the disease than men, are at a premium in the matrimonial market, and command a substantial pecuniary price. The desire for marriage among the men seems to be chiefly based on the hope of securing a nurse against a time when they can no longer do anything for themselves. Either from the frequency of an implication of the organs of generation or from the constitutional depression these marriages are almost always sterile. The disease is eminently hereditary. Out of twenty-six cases which are described in detail by the writer no less than twenty-one were of leprous parentage. While a child of a leprous father may in rare cases escape the malady, there is no authentic instance, according to this author, of a leprous mother failing to transmit the disease, which appears in the child at from eight to ten years, never earlier.

Little is known regarding the cause of leprosy, but M. Lortet points out the interesting fact that all the lepers in Syria are fellahs, that is, mussulman or Christian farmers, whose diet is notably poor, consisting of innutritious vegetables like lentils, with never any meat. The Israelites, and in general the inhabitants of the towns, however insalubrious the surroundings of the latter, are exempt from leprosy. Ichthyophagy, as a cause of the disease, is rejected by M. Lortet, his Syrian fellahs having for the most part no fish to eat. The largely maritime distribution of leprosy, with other facts which have given credit to the theory that ascribes it to a fish diet, are reconcilable with M. Lortet's observations if we suppose leprosy to be in part at least a vice of nutrition, and caused alike whether bad fish or any other innutritious food is made the only diet to the exclusion of adequate alimentation.

M. Lortet believes leprosy to be contagious through the channel of the cutaneous lesions, the lungs, and the digestive tract. He also confirms the view of its parasitic nature, held by many recent observers. He found in sections from non-ulcerated leprous tubercles that the derm was infiltrated with large, irregular cells, multipolar, and filled with long, very slender bacteria, which possessed a very active movement.

The description of leprosy as it exists to-day in the Holy Land suggests, very naturally, the inquiry how far it is identical with the disease called by that name in the Bible. In the thirteenth chapter of Leviticus are to be found the Mosaic rules for diagnosis of leprosy. From these it seems probable that the lawgiver included under that title a number of contagious diseases, among them favus and tinea barbæ (verses 29, 30). While some authorities have denied that the leprosy of Moses included at all the *elephantiasis Græcorum*, others have recognized this as one of the types which he described. In the *Popular Science Monthly* for April Dr. George H. Fox discusses this question. He shows that the expression "white as snow," so frequently applied to the appearance of the disease, does not seem applicable to modern leprosy of either the macular or of the tuberculous type. The direction for the patient to be examined by the priest after seven days for evidence of change in his condition seems to contemplate some disease less chronic in its development than leprosy. It may well be supposed that the practical purpose of Moses' instruction being preventive treatment, the law-giver may have included all contagious skin diseases with which he

was acquainted under one term without specifying or even knowing their diagnostic differentiation.

Regarding the "leprosy" of the New Testament, Dr. Fox points out its probable identity with psoriasis. The Septuagint translators rendered the Hebrew *tsaraath* by the word *lepra*, which was the name of a disease characterized by white scaly patches (psoriasis), and familiar to the Greeks, who, on the other hand, knew nothing of leprosy. Afterwards the true leprosy, the "Phœnician disease," was introduced into Greece, and was called elephantiasis. The word used by the evangelists, Matthew and Mark, in describing the miracle of the Saviour is lepra and not elephantiasis. The translators of the English Bible rendered this word "leprosy," which was also the translation of the Hebrew *tsaraath*, because the Septuagint translators had rendered the latter word by lepra. The inference is clear that the leprosy of the New Testament was psoriasis, and it is not improbable that it was this disease which made some of its subjects among the ancient Hebrews "as white as snow."

LEGISLATION IN NEW YORK FOR THE PROTECTION OF FOOD PRODUCTS.

THE Committee on Public Health have made their report to the New York Legislature in regard to imitation butter, and recommended, as the result of their investigations, that its manufacture should be totally prohibited by law. In the course of it they say: "While not averring that oleomargarine is necessarily always unwholesome, the committee believe that it is likely to be so, and to a large extent would necessarily be injurious if used by children or persons in delicate health, and that it is not in any sense, or can be, a wholesome substitute for pure and natural butter."

In consequence of this report Judge Low's bill "to prevent deception in sales of dairy products," which met with very little opposition, was ordered to a third reading on the 28th of March. This goes to the root of the evil, and prohibits the manufacture or sale of any of these adulterations in the State of New York. All previous legislation on the subject has merely sought to regulate the sale of imitation butter so as to enable purchasers to know what they were buying, but though no less than seven bills for the protection of the people against deception and imposition have been passed by the Legislature during the last five years, all attempts to do this have hitherto proved a complete failure, as was shown by the experience of the Senate Committee on Public Health, which, during its recent sessions in New York, found that the analysis of thirty samples of butter purchased from different grocers in New York and Brooklyn showed that twenty of them were imitations, although they were all represented by the venders to be "pure butter." The bill, as introduced, constituted the State Dairymen's Association a commission charged with the enforcement of its various provisions, and appropriated $30,000 to defray expenses, but it was afterwards amended by substituting for the Dairymen's Association a "dairy commissioner," who should be appointed by the Governor, and receive a salary of $3000 and his necessary expenses. It is stated that such a prohibitory law has worked well in Missouri, and that in consequence of its rigid enforcement a large quantity of imitation butter, manufactured in Chicago, which used to be supplied to that State, is now sent on to New York.

During the week ending March 22d 33,405 pounds of diseased meat and "bob" veal were seized by the inspectors of the Health Department in New York. and Health Commissioner Raymond, of Brooklyn, has made the following order: "In order to prevent the admission of meats of an unwholesome quality into the markets of the city on and after March 26, 1884, no cows or bulls shall be slaughtered in any slaughtering house in the city of Brooklyn except in the presence of an inspector of the Health Department, the owners of said slaughtering establishments to receive notice of the time when said inspectors will be present."

Massachusetts seems to be the only State at present which evinces any marked disposition to progress backwards in these legislative questions for the protection of the public against adulterations of foods and drugs.

MEDICAL NOTES.

— Dr. Fordyce Barker and Surgeon J. S. Billings sailed from New York last week to receive the degree of LL. D. at the approaching tercentenary of the University of Edinburgh. We understand the same honor was offered to other gentlemen connected with the medical profession, but that the necessity for personal presence prevented its acceptance.

— At the annual meeting of the New York Neurological Society held April 1st, William J. Morton, M. D., was elected President, and E. C. Wendt, M. D., Secretary.

— Dr. Wood, editor of the *North Carolina Medical Journal*, is engaged upon an inquiry as to the effects of tobacco upon the human system, with a view to publication, and is glad to receive reports from any reliable medical source.

— The conclusions of an article in review of the treatment of uterine fibromata, in the *Revue Médicale* (9 February, 1884), may perhaps, be taken as reflecting the French sentiment, in this respect. They are as follows: Expectation, too much neglected by the Germans, better respected in England, ought to play an important rôle in the therapeutics of uterine fibromata. Surgical interference ought to be made only in cases which are serious either from pains or hæmorrhages which they produce. In order that the operation be justified the pains must be such as to render life insupportable to the patient, and the hæmorrhages so severe as to expose her to mortal danger. When, finally, the operation is resolved upon, castration is the measure to which recourse should be had in cases where the tumor is not bulky, and ablation, on the

other hand, where the volume of the tumor is considerable.

— An International Prison Congress will meet at Rome next October.

— The Kansas Legislature has been considering a bill for the protection of domestic animals, and also one for establishing an office of State Veterinarian, whose duties shall be to investigate all infectious or contagious diseases, under direction of the Live Stock Sanitary Commission, visiting at once any locality where such disease may be located, establish quarantine, and take other necessary measures. He shall keep posted in all diseases of live stock, and make reports and perform such other service as may be required by law or directed by the Sanitary Commission. A salary of $2500, with traveling expenses, is proposed.

— From the edition of Messrs. George P. Rowell & Co.'s American Newspaper Directory, now in press, it appears that the newspapers and periodicals of all kinds at present issued in the United States and Canada reach a grand total of 13,402. This is a net gain of precisely 1600 during the last twelve months, and exhibits an increase of 5618 over the total number published just ten years since. The increase in 1874 over the total for 1873 was 493. During the past year the dailies have increased from 1138 to 1254; the weeklies from 9062 to 10,028; and the monthlies from 1091 to 1499. The greatest increase is in the Western States. Illinois, for instance, now shows 1009 papers in place of last year's total of 904, while Missouri issues 604 instead of the 523 reported in 1883. Other leading Western States also exhibit a great percentage of increase. The total number of papers in New York State is 1523 against 1399 in 1883. Canada has shared in the general increase.

— We learn from our foreign exchanges that the French Court of Cassation has quashed a judgment obtained some time ago by the proprietress of a hotel near the Sorbonne, awarding damages for disturbance to her trade caused by the howlings of dogs undergoing vivisection at that institution. The court holds that the physiological experiments in question constitute a branch of instruction given by the State, and that M. Paul Bert, against whom the judgment was obtained, and other professors of every rank, accomplish by such experiments a public service.

NEW YORK.

— A communication was received by the New York Board of Health, on March 25th, from the Department of State forwarding a request from the Duke of Buckingham that the Health Department of the city should be represented at the International Health Exhibition in London in May next, and also at the International Sanitary Congress in the same city in June. The Board designated Dr. Woolsey Johnson, Health Commissioner, and Prof. Charles F. Chandler, late president of the Board, as its representatives, and also resolved to call the attention of the Chamber of Commerce and the Board of Education to the matter in order that these bodies might send representatives to the exhibition and congress, and that public interest might be aroused in regard to the same.

PHILADELPHIA.

— The Philadelphia County Medical Society held a stated quarterly meeting for the election of new members April 2d. Among the candidates to be balloted for was the name of a graduate of the Women's Medical College, but who was personally and professionally qualified for membership, and was so reported by the Board of Censors. It was found, however, that the opposition to woman physicians was both strong and active, and she failed to be elected. At this meeting an amendment to the Constitution was voted upon, making women ineligible as candidates for membership, by the introduction of the word "male" before the word "physician," so that Article I. of the Constitution should read "This Society shall consist of regular, *male* physicians, residents of the County of Philadelphia," etc. Out of 127 votes 78 were in favor and 49 against the amendment, which failed of being adopted, as it did not receive a two-thirds vote. The discussion of the question revealed a radical and irreconcilable difference of opinion concerning the functions of a county medical society, one side holding that it was an independent organization, with the right to refuse admission to membership on other than professional grounds, the other maintaining that as a representative body it belonged to the members of the profession in Philadelphia County, whom it claimed to represent; all of whom were therefore entitled to membership. The fact that other counties in Pennsylvania have acknowledged the truth of this principle, and that the New York County Medical Society has adopted it, shows that there are no insuperable objections to its adoption in Philadelphia.

The County Medical Society holds three conversational meetings each month, which are well attended, one or two papers being read at each meeting. The discussion on tuberculosis, inaugurated by Dr. Formad's paper, Is Consumption Contagious, was well sustained and very interesting.

— The State Medical Society will meet in Philadelphia next month (May 14th, 15th, and 16th). Among its members are several woman physicians, one of whom, Dr. Alice Bennett, of Norristown, will deliver the Address on Mental Disorders. Dr. John B. Roberts will read the Address on Surgery; Dr. Jacob Price, of Westchester, that on Obstetrics; Dr. Benjamin Lee, in Hygiene; Dr. W. H. Daly, of Pittsburg, in Medicine, and Dr. William S. Little on Ophthalmology.

— The Jefferson Medical College held its fifty-ninth annual commencement on March 29th, when a class of 215 was graduated, many of whom were third-course students. The matriculates this session were 554, nearly as many as last session. The degree of LL. D. was conferred upon J. M. DaCosta of Philadelphia, and Prof. Benjamin Silliman of New Haven, and that of D. D. upon Rev. J. F. Dripps of Philadelphia.

— The University of Pennsylvania will hold its one hundred and nineteenth annual commencement

May 1st, when about 100 will receive the degree of M. D. The first-year class numbers 140, which is considerably larger than last year.

— The thirty-second annual commencement of the Women's Medical College was held March 13th, when the degree of M. D. was conferred upon twenty-six graduates.

— The Medico-Chirurgical College graduated four at its commencement held April 3d. This college has recently lost its President, Dr. G. P. Oliver, who died suddenly with apoplexy about two months ago, and also Prof. F. O. Nagle, who died February 1st with typhoid fever. It is probable that the school will be reorganized during the summer, and enter upon a larger and more important work under the guidance of a few young, able, and energetic members of the profession.

— A new organization, the Medical Jurisprudence Society, for the cultivation of medico-legal science, has been started, with Prof. Emeritus S. D. Gross, M. D., LL. D., D. C. L., as president. It meets on the second Tuesday of each month (save July and August) at the hall of the College of Physicians. A Clinical Society has also been formed out of the old Northern Medical Association.

— Prof. H. G. Landis, of Columbus, Ohio, who was the orator of the Alumni Association, was the recipient of marked attention while here, and was complimented by a dinner at the St. George Hotel given by the Association.

Miscellany.

AN EPIDEMIC OF TRICHINOSIS.

One of the most extensive and fatal outbreaks of trichinosis in recent years has recently occurred in the district of Magdeburg, an account of which may be found in the December number of the *Centralblatt für allg. Gesundheitspflege*, and also in the *Practitioner* for February, 1884.

"It appears that the flesh of an undoubtedly trichinous pig which had been slaughtered on the 15th of September last at the little town of Emersleben was disposed of on that and the following day in Emersleben and neighboring villages. According to universal custom in Saxony nearly the whole of the flesh was eaten in a raw state as minced meat.

"The earliest cases of illness showed themselves in Emersleben on the 18th of September, and by the 28th of the month the disease was prevalent throughout the place.

"The first symptoms noticeable in the cases were violent diarrhœa and marked loss of strength. The persons first attacked were the family of the butcher who killed the pig, no member of which escaped. The disease was at once recognized to be trichinosis, and upon further inquiry it was ascertained that in every instance pork obtained from the same source had been partaken of in a raw or green-smoked state previous to illness.

"The epidemic continued to augment in numbers until the beginning of October, when also the first fatal case occurred. On examining the muscles of the body numerous trichinæ were discovered, and enormous numbers were present in the contents of the intestine, every preparation of the intestinal mucus disclosing from ten to fifteen trichinæ within a field of the magnitude of a small lentil.

"In subsequent deaths microscopic examination revealed similar results, the numbers of trichinæ in the muscles being less remarkable, however, than the swarms which, including adult forms, were always present in the intestine.

"Up to November 11th there had occurred in Emersleben (a place of 900 inhabitants), 240; in Deesdorf (with 400 inhabitants), 40; in Nieuhagen, 70; and in the remaining localities affected, 11; in all 361 cases of trichinosis, and of these 57 had proved fatal, including 45 deaths in Emersleben and 10 in Deesdorf."

ADULTERATED DRUGS.

The following remonstrance, addressed to the Senate and House of Representatives of Massachusetts, was drawn up by Dr. Henry W. Williams, and, as will be observed, is signed by the President and all the living ex-presidents of the Massachusetts Medical Society: —

The undersigned, physicians of Massachusetts, respectly represent that, in our opinion, the United States Pharmacopœia should be the *only* standard for the preparation and sale of drugs and medicines, and we earnestly remonstrate against any alteration of the present law relating to the adulteration of medicines or of articles of food, believing, as we do, that this law is an important safeguard to the public.

Alfred Hosmer, President of the Massachusetts Medical Society,
George C. Shattuck, Ex-President.
George H. Lyman, Ex-President.
Benjamin E. Cotting, Ex-President.
Henry W. Williams, Ex-President.

The discussion of this subject in the House of Representatives was assigned for Wednesday, April 9th.

FOOT-BALL: THE KILLED AND WOUNDED.

The result, on one day recently, of four foot-ball fights — it is a gross misuse of language to call them "games" — was that two young men lost their lives, and two sustained fractures of the leg, in one instance apparently a severe compound fracture; one of the deaths was said to have been due to heart-disease, the other was clearly caused by fracture of the spine in the neck. It is a great pity that what might be a manly and health-giving game should have been allowed to degenerate into a kind of organized faction fight. The human skull, unlike that of the goat and bull, is not adapted for use as a battering-ram; the death of a young man who perishes in the attempt to emulate the tactics of a goat or a bull may perhaps not be any great loss to the community, but what we complain of is that such conduct should be held up before the eyes of a number of young men and lads as an example to be followed. The constituted authorities of foot-ball ought to be able to make regulations sufficiently stringent to prevent the, at present, high percentage of killed and wounded.

If they want a precedent they have only to turn to the action of the cricket legislature, which is to meet at Lord's next month. in order to pass laws intended to put a stop to certain dangerous abuses which have crept into the noble game. — *British Medical Journal*, March 22d.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 29, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	648	229	16.50	16.80	3.30	4.50	1.65
Philadelphia	927,995	412	119	14.16	17.17	—	5.76	3.12
Brooklyn	644,526	224	80	14.40	16.20	5.85	5.85	1.80
Chicago	632,100	206	101	15.68	9.31	2.45	5.88	1.96
Boston	423,800	152	55	9.24	21.78	2.64	1.98	1.32
Baltimore	408,520	159	81	25.20	10.08	2.52	2.52	1.89
St. Louis	400,000	138	43	10.95	10.22	—	4.38	2.92
Cincinnati	272,400	93	26	14.07	21.60	2.16	—	1.08
New Orleans	234,000	148	51	24.84	8.84	2.72	1.36	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	97	31	17.51	13.39	1.03	1.03	8.24
Pittsburg	180,000	83	64	8.47	15.73	3.63	—	1.21
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	28	11	17.85	3.57	—	3.57	10.71
Nashville	54,400	20	10	10.00	5.00	—	—	5.00
Charleston	52,286	30	13	10.00	3.33	—	—	—
Lowell	71,447	37	10	5.40	16.20	—	—	—
Worcester	69,442	22	10	18.20	9.10	—	4.55	—
Fall River	62,674	34	13	14.82	5.88	—	—	—
Cambridge	60,995	24	4	4.16	33.28	—	—	—
Lawrence	45,516	17	8	11.76	17.64	—	—	—
Lynn	44,895	14	4	7.14	14.28	—	—	—
Springfield	38,090	16	4	25.00	—	—	18.75	—
Somerville	31,350	10	3	10.00	20.00	—	10.00	—
Holyoke	30,515	10	3	10.00	20.00	10.00	—	—
New Bedford	30,144	15	2	6.66	20.00	6.66	—	—
Salem	29,503	9	1	—	33.33	—	—	—
Chelsea	24,347	9	5	—	11.11	—	—	—
Taunton	22,693	7	1	—	28.56	—	—	—
Gloucester	21,400	6	1	—	33.33	—	—	—
Haverhill	20,905	8	2	25.00	12.50	12.50	—	—
Newton	19,421	8	3	—	12.50	—	—	—
Brockton	18,323	10	4	20.00	—	—	—	—
Malden	15,273	2	1	—	—	—	—	—
Newburyport	13,947	3	0	—	—	—	—	—
Fitchburg	13,433	3	1	33.33	—	—	—	—
Seventy-seven Massachusetts towns.	182,911	87	17	11.90	23.80	—	4.76	2.38

Deaths reported 2789 (no reports from Buffalo, Milwaukee, and Providence): under five years of age, 1011: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 419, consumption 418, lung diseases 411, diphtheria and croup 105, scarlet fever 56, diarrhœal diseases 51, measles 43, typhoid fever 34, cerebro-spinal meningitis 25, erysipelas 22, whooping-cough 23, puerperal fever 21, small-pox 18, malarial fever 18, typhus fever three. From *measles*, Baltimore 19, New York 11, New Orleans six, Philadelphia, Brooklyn, and District of Columbia two each, Charleston one. From *typhoid fever*, Philadelphia 15, Baltimore five, New York and Pittsburg three each, Brooklyn, Cincinnati, New Orleans, Nashville, Worcester, Lawrence, and Fairhaven one each. From *cerebro-spinal meningitis*, New York eight, Fall River three, Philadelphia, Cincinnati, and Worcester two each, Chicago, Baltimore, Charleston, Lawrence, Lynn, Haverhill, Brockton, and Fitchburg one each. From *erysipelas* New York seven, Chicago four, Brooklyn and Boston two each, Philadelphia, Baltimore, New Orleans, Charleston, Brockton, Hingham, and West Brookfield one each. From *whooping-cough*, New York six, New Orleans four, Brooklyn, District of Columbia, and Boston three each, Philadelphia, Chicago, Baltimore, and Cincinnati one each. From *puerperal fever*, Chicago five, New York three, St. Louis, Cincinnati, and Lowell two each, Philadelphia, Brooklyn, New Orleans, District of Columbia, Cambridge, Springfield, and Stoneham one each. From *small-pox*, New Orleans 15, Cincinnati three. From *malarial fevers*, New York six, Brooklyn and St. Louis three each, Baltimore and New Orleans two each, Cincinnati and New Haven one each. From *typhus fever*, New York three.

Seven cases of small-pox were reported in St. Louis, Cincinnati two; scarlet fever 43, diphtheria 16, typhoid fever eight, and measles one, in Boston.

In 97 cities and towns of Massachusetts, with an estimated population of 1,149,642 (estimated population of the State 1,955,104), the total death-rate for the week was 22.61 against 18.21 and 17.07 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending March 15th, the death-rate was 22.6. Deaths reported 3796: acute diseases of the respiratory organs (London) 370, whooping-cough 160, measles 146, scarlet fever 81, fever 40, diarrhœa 38, diphtheria 20, small-pox (London 11, Liverpool and Sunderland two each, Sheffield and Newcastle one each) 17. The death-rates ranged from 15.2 in Plymouth to 30.5 in Manchester; Bradford 19.2; Sheffield 19.4; Birmingham 21.1; London 21.6; Leicester 21.6; Nottingham 21.9; Liverpool 22.8; Sunderland 23.7; Leeds 29.8; Birkenhead 29.9. In Edinburgh 21.6; Glasgow 23.3; Dublin 27.4.

For the week ending March 15th, in the Swiss towns, there were 35 deaths from consumption, lung diseases 33, diarrhœal diseases 19, typhoid fever 16, whooping-cough 13, diphtheria and croup 10, measles four, scarlet fever two. The death-rates were, at Geneva 29.6; Zurich 19.7; Basle 20.9; Berne 23.3.

The meteorological record for the week ending March 29th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7. 23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in Inches.
Sun., 23	30.172	45	58	37	77	67	100	81	SE	SW	S	4	13	6	C	O	R	—	—
Mon., 24	29.736	51	60	43	96	58	75	76	W	NW	NW	8	8	12	O	O	O	—	—
Tues., 25	29.964	48	59	38	74	52	83	70	W	NW	SW	7	7	4	F	C	C	—	—
Wed., 26	29.711	43	48	37	89	97	100	95	SE	E	NW	10	16	3	O	R	O	—	—
Thurs., 27	29.539	42	49	37	95	83	80	86	NW	NW	NW	11	16	10	O	R	A	—	—
Fri., 28	29.600	44	53	38	80	54	71	68	W	NW	NW	11	17	12	O	F	C	—	—
Sat., 29	29.520	42	49	36	80	60	75	72	N	NW	NW	7	11	6	O	O	F	—	—
Mean, the Week.	29.748	45	60	36				78										28.50	1.18

[1] O., cloudy; C., clear; F., fair; G., fog; H., sleet; S., snow; R., rain; T., threatening; A., clearing up.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, JANUARY 1, 1884. TO MARCH 31, 1884.

FESSENDEN, C. S. D., surgeon. To proceed to Cairo, Illinois, and Memphis, Tennessee, as inspector. March 5, 1884.

PURVIANCE, GEORGE, surgeon. Granted leave of absence for thirty days. February 16, 1884.

SMITH, HENRY, surgeon. To rejoin his station at Norfolk, Virginia. March 7, 1884.

IRWIN, FAIRFAX, passed assistant surgeon. Relieved from duty at Norfolk, Virginia; to assume charge of Cape Charles Quarantine Station. March 7, 1884.

CARMICHAEL, D. A., assistant surgeon. To report to Surgeon Purviance for examination for promotion. March 5, 1884.

ARMSTRONG, S. T., assistant surgeon. To report to Surgeon Fessenden for examination for promotion. March 5, 1884.

BENNETT, P. H., assistant surgeon. Leave of absence extended ten days. January 18, 1884.

AMES, R. P. M., assistant surgeon. Detailed for temporary duty on relief boat, — Ohio River flood sufferers. February 16 and March 1, 1884.

DEVAN, S. C., assistant surgeon. Upon expiration of leave of absence to proceed to St. Louis, Missouri, for temporary duty. February 6, 1884.

KALLOCH, P. C., assistant surgeon. To proceed to Charleston, South Carolina, for temporary duty. February 1, 1884.

BEVAN, A. D., assistant surgeon. Granted leave of absence for seven days. March 13, 1884.

WASDIN, EUGENE, assistant surgeon. Granted leave of absence for fifteen days. March 4, 1884.

BATTLE, K. P., assistant surgeon. To proceed to New York, N. Y., for temporary duty. February 4, 1884.

RESIGNATION.

COOKE, H. P., passed assistant surgeon. Resignation accepted by the Secretary of the Treasury, to take effect February 5, 1884. January 31, 1884.

APPOINTMENT.

BATTLE, KEMP P., M. D., of North Carolina, having passed the examination required by the regulations, was appointed an assistant surgeon by the Secretary of the Treasury, February 2, 1884.

PROMOTIONS.

CARMICHAEL, D. A., passed assistant surgeon. Promoted and appointed passed assistant surgeon, by the Secretary of the Treasury, from March 1, 1884. March 18, 1884.

ARMSTRONG, S. T., passed assistant surgeon. Promoted and appointed passed assistant surgeon, by the Secretary of the Treasury, from April 1, 1884. March 28, 1884.

A CORRECTION.

MR. EDITOR, — Through an error in copying the statement is made in the article on Tracheotomy in the last number of the JOURNAL, that *eleven* patients recovered. The facts are as follows: Number of operations, twenty-one; number of recoveries, *ten*. Very truly yours, GEO. W. GAY, M. D.

BOSTON, *April* 5, 1884.

THE ASSOCIATION OF AMERICAN MEDICAL EDITORS. ANNUAL MEETING, WASHINGTON, D. C., MAY 5, 1884. — The annual meeting of the Association of American Medical Editors will be held in Washington, May 5th, at eight P. M., in Medical Hall, southeast corner of Sixth and F Streets. The Annual Address will be delivered by President Leartus Connor, M. D., on The American Medical Journal of the Future, as indicated by the History of American Medical Journals in the Past. Dr. N. S. Davis will open the discussion on How far can Legislation Aid in Elevating the Standard of Medical Education in this Country? in which Dr. A. B. Palmer, Dr. H. O. Marcy, Dr. L. S. McMurtry, Dr. C. H. Hughes, Dr. Frank Woodbury, Dr. William Brodie, Dr. A. N. Bell, Dr. William B. Atkinson, Dr. W. C. Wile, Dr. W. R. D. Blackwood, Dr. Henry Leffmann, and Dr. Deering J. Roberts will take part. All members of the profession, especially journalists and authors, are invited to be present and take part in the meeting.

JOHN V. SHOEMAKER, M. D., *Secretary*.
PHILADELPHIA, 1031 Walnut Street.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY. — The annual meeting will be held at Porter's Hotel, North Cambridge, on Wednesday, April 16, 1884, at twelve o'clock. The Annual Address will be delivered at one o'clock P. M. by Dr. H. M. Field, of Newton. A special dinner will be served at two o'clock P. M. The Censors of the Society will meet at the same place, at 11.30 A. M. of the same day, to consider applications for admission to the Massachusetts Medical Society. The annual assessment should be paid to Dr. J. W. Willis, Treasurer, before the meeting of the State Society. Members may order telephone messages to be sent to No. 7081, and they will be delivered at the Hotel. WALTER ELA, *Secretary*.
CAMBRIDGE, *April* 9, 1884.

ILLINOIS STATE BOARD OF HEALTH. — The regular quarterly meeting of the Illinois State Board of Health will be held at the Grand Pacific Hotel, in Chicago, beginning Thursday, April 17th. At this session candidates for certificates will be examined, both non-graduates, who must undergo an examination upon their preliminary education, as well as in the usual branches of medical study, and also graduates of colleges which have not fully complied with the schedule of minimum requirements adopted by the Board in 1880, and in force from and after the session of 1882–83.

BOOKS AND PAMPHLETS RECEIVED. — Fourteenth Annual Report of the Massachusetts Homœopathic Hospital and of the Ladies' Aid Association for the Year ending December 31, 1883. Boston. 1884.

1883. Annual Report of the Presbyterian Eye, Ear, and Throat Charity Hospital, No. 77 East Baltimore Street, Baltimore, Md. 1884.

Original Articles.

ENTERIC FEVER IN NEW HAVEN.[1]

BY GUSTAVUS ELIOT, A. M., M. D.,
Attending Physician to the New Haven Dispensary.

I HAVE chosen to use the name enteric fever to designate the disease commonly known as typhoid fever, in preference to the latter term, for the following reasons: First, the adjective typhoid has been used to such an extent, in connection with various diseases accompanied by serious symptoms, that its use at the present time is frequently misleading both to the public and to the profession. Second, the name enteric fever is used instead of typhoid fever in the Provisional Nomenclature of the Royal College of Physicians, London, which was adopted in 1873 by the United States Marine Hospital Bureau as the nosological system to be observed by medical officers of the service in their reports and communications. Third, the same name is now frequently employed by medical authors and teachers.

Few diseases which prevail in this vicinity are more terrible than the one under consideration. Selecting as its victims those in the full vigor of early adult life, insidious in its onset, increasing daily in severity, protracted in its course, steadily destructive to the most vital tissues and organs of the body, attended by a liability to the most serious complications, it frequently proves fatal, and even when life is spared it is too often followed by disagreeable sequelæ and protracted convalescence. And yet all this is avoidable if we may believe a recent writer[2] on this subject, who tells us that "enteric fever destroys more lives that could be saved than any other acute disease." If there is any ground for such an assertion, the conditions which govern the occurrence of the disease are of incalculable practical importance. I have therefore ventured to introduce the subject at this time with the hope that the members of the Society may from their personal experience contribute some facts toward the solution of the obscure problem, — *what is the origin of the cases of enteric fever which occur in this city?*

During the later months of the year just ended there were an unusual number of deaths from this disease. In October the newspapers attempted to excite something of a sensation on account of the cases which had been reported up to that time. The Health Officer was interviewed, and proved by statistics that the disease was not especially prevalent, that, in fact, it was rather less prevalent than usual. An eminent surgeon was reported to have reiterated the views of the Health Officer. Numerous other physicians expressed the opinion that there neither had been nor was then an unusual number of cases of the disease. But in spite of mathematical proofs and favorable prophecies the mortality report for November indicated that there had been nine deaths from "typhoid fever," — a larger number than had been reported in any one month for ten years.

The existence of conflicting opinions, and of a divergence between opinions and facts, would seem to indicate the desirability of an inquiry into the comparative prevalence of the disease in this and preceding years. With the aid of the Statements of Mortality, published monthly since July, 1874, by order of the Board of Health, I have prepared the following tables: —

I. NUMBER OF DEATHS FROM "TYPHOID FEVER" FOR EACH MONTH SINCE JULY, 1874.

	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	Total.
January	–	3	2	3	1	–	–	1	2	3	15
February	–	4	–	2	1	–	–	1	2	2	12
March	–	1	3	1	–	–	1	2	–	–	8
April	–	6	1	–	1	4	3	2	2	1	19
May	–	2	1	–	–	2	4	–	–	1	10
June	–	1	1	–	–	1	2	1	–	–	6
July	7	–	3	–	1	1	1	3	–	2	18
August	5	3	6	1	2	1	2	1	5	6	32
September	5	6	3	–	3	–	2	1	4	3	27
October	7	2	1	3	–	–	–	4	1	4	22
November	5	5	1	1	–	–	–	4	4	9	29
December	–	3	–	2	4	1	1	7	3	2	23
Total	29	36	22	13	13	10	16	27	23	33	221

This table indicates that the greatest mortality from enteric fever in New Haven, during the last ten years, occurred in 1874–1875; that the fewest deaths occurred in 1877, 1878, 1879 — fewest of all in 1879; and the mortality during the last six months of 1883 was greater than during any other period of six months since 1874.

Since June, 1877, a considerable number of deaths from typho-malarial fever have been noted in the monthly statements. They are included in the next table: —

II. NUMBER OF DEATHS FROM "TYPHO-MALARIAL FEVER" FOR EACH MONTH SINCE JUNE, 1877.

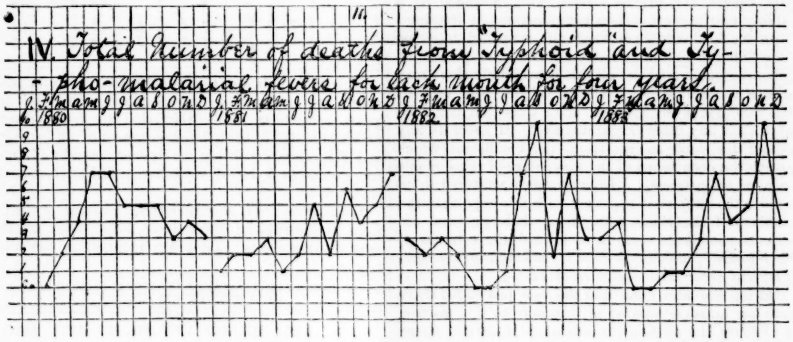
	1877	1878	1879	1880	1881	1882	1883	Total.
January	–	–	1	–	–	1	–	2
February	–	1	–	–	1	–	2	4
March	–	1	–	1	–	3	–	5
April	–	–	–	1	1	–	–	2
May	–	–	1	3	1	–	–	5
June	4	–	–	5	1	–	1	11
July	1	1	2	4	2	1	1	12
August	–	1	3	3	1	2	1	11
September	–	1	1	3	5	6	1	17
October	–	1	5	3	–	1	1	11
November	6	1	–	4	1	3	1	16
December	1	–	–	2	–	–	2	5
Total	12	7	13	29	13	17	10	101

If we may judge from the opinions expressed in public and private by some of the practitioners of this

[1] Read before the New Haven Medical Association, January 21, 1884.

[2] Wilson, A Treatise on the Continued Fevers, page 221.

city, the term typho-malarial fever is used by them in a somewhat different sense from that generally understood by the profession. Some apply the name to febrile affections of purely malarial origin which present a certain train of symptoms. Others make use of the term to designate a specific disease distinct from enteric fever on the one hand and from fevers of purely malarial origin on the other. Either of these views is equally untenable when examined by the light of recent literature. The name typho-malarial fever was proposed in the summer of 1862 by Dr. J. J. Woodward, Surgeon United States Army, "to a Board of Medical Officers who were directed to revise the form of sick report in use in the army," to designate the "hybrid forms" of fever "resulting from the combined influence of malarial poisoning and of the causes of typhoid fever" which then prevailed in the Army of the Potomac. In September, 1863, Dr. Woodward, in a circular of the Surgeon-General's office, made a statement of the meaning he designed to attach to the term; and in November of the same year he presented his views upon the subject at some length in the Outlines of the Chief Camp Diseases of the United States Armies." In 1876 he professed to hold "substantially the same views," although at that time he frankly confessed that during his earlier studies he had fallen into "some errors of details (particularly with regard to the pathological anatomy of the intestines in these forms) which were incorporated in the account presented in the book on Camp Diseases." "During my earlier studies," says Dr. Woodward, "I believed that I had observed certain peculiarities in the character of the ulcers in these cases, by which they might be distinguished from the lesions of simple typhoid. A larger experience, especially the examination of a large number of specimens received by the Medical Section of the Army Medical Museum, has convinced me that this opinion was premature. I renounce it as erroneous. There is really nothing in the lesions of Peyer's glands, in these cases, to distinguish them from ordinary cases of typhoid fever." Such an unequivocal and impartial statement leaves little doubt as to where Dr. Woodward stands on this question. These views he expressed at the International Medical Congress in Philadelphia, 1876. To show that he does not stand alone in adherence to these opinions it is only necessary to quote a resolution adopted by the Section of Medicine of that Congress, as expressing the opinion of the Section, to this effect: "Typho-malarial fever is not a specific or distinct type of disease, but the term may be conveniently applied to the compound forms of fever which result from the combined influence of the causes of the malarious fevers and of typhoid fever." All recent writers are, so far as I know, of the same opin-



ion. I need only quote Flint, than whom no author in this country is more extensively read or more implicitly trusted, who says: "Typho-malarial fever is caused by the combined action of malaria and the special cause of typhoid fever."[1]

Much of the present confusion in regard to the nomenclature of prevalent febrile affections is due, I believe, to the description of typhoid fever as given by Liebermeister and followed by many later writers. These descriptions led students to expect to find the febrile movement advance with almost mechanical regularity. When in practice they found a disease which manifested all the other symptoms of typhoid fever as they had learned them, but in which the range of temperature did not correspond very closely to what they had learned, they at once set to work to find some cause for what seemed not to belong to the disease. Here, as in numerous other instances, malaria was made the scapegoat, and was forced to bear this along with many other equally undeserved burdens. I do not deny that occasionally the two poisons may exist in the body together and produce, each its characteristic effects simultaneously. But, on the other hand, I am strongly of the opinion that in the majority of doubtful cases, even where the disease is ushered in by a single or repeated chills and by a rapid rise of temperature, it is more reasonable to believe that the peculiar symtomatology of any particular case is due to a normal though perhaps an unusual manifestation of the typhoid poison than to assume that it is due to the existence within the body of the patient of a poison whose presence it is impossible to prove.

In view of these circumstances, and to more accurately indicate the mortality due to the typhoid poison, I have constructed a third table based upon the total number of deaths from the two diseases for each month of the last six years. (See Table on page 363.)

The same facts so far as they relate to the last four years I have also represented by the graphic method given in the above diagram.

These tables — assuming that the causes of death are always correctly reported — do not indicate such an unusual prevalence of enteric fever during the past

[1] Flint, Principles and Practice of Medicine, 5th edition, 1881.

III. TOTAL NUMBER OF DEATHS FROM "TYPHOID" AND "TYPHO-MALARIAL" FEVERS SINCE 1877.

	1878	1879	1880	1881	1882	1883	Total.
January....	1	1	-	1	3	3	9
February....	2	-	-	2	2	4	10
March.....	1	-	2	2	3	-	8
April.....	1	4	4	3	2	-	14
May.....	-	3	7	1	-	1	12
June.....	-	1	7	2	-	1	11
July.....	2	3	5	5	1	3	19
August.....	3	4	5	2	7	7	28
September..	4	1	5	6	10	4	30
October.....	1	5	3	4	2	5	20
November...	1	-	4	5	7	10	27
December..	4	1	3	7	3	4	22
Total.....	20	23	45	40	40	42	210

year as one would have been led to expect from the number of cases which have been reported in the daily press. Perhaps one reason why the disease has recently attracted especial attention on the part of the public is on account of the social importance of its victims. Another reason why at the present time it unquestionably should command the attention of the profession is the fact that cases of the disease have been reported in nearly all of the neighboring towns, whence are derived the water and milk supplies of the city. It will be instructive to observe during the coming year whether the occurrence of the disease can in any case be traced to infection from either of these sources.

ST. MARY'S LYING-IN HOSPITAL.[1]

BY BENJAMIN CUSHING, M. D.

THE St. Mary's Infant Asylum and Lying-In Hospital, Bowdoin Street, Dorchester, in care of the Sisters of Charity, was opened in September, 1874. To this date, January 8, 1884, during nine years and four months, there have been in the lying-in room 550 patients, a yearly average of about fifty-eight. Married women, twenty. Single, 530. Of the married, one was delivered of her eighth child, one of her fifth, three of their third, and one single woman (colored) of her second. As to ages, two were fourteen years, one thirteen years six months, and the others of ages from fifteen to thirty-eight years. Presentations other than of the head were one of the hand, and several, I do not know exactly how many, of the breech and of the cord. One case of twins. One case of convulsions. In the case of hand presentation the child was turned. Forceps have occasionally been used. One woman (married) was in consumption when she came to the house. A week after delivery, by her own wish, she was taken to her home, where she soon died. One young woman (single) on the tenth day after delivery, was taken away by her friends, and died under circumstances unexplained. The patient who had convulsions was a young woman who had received an education above her social position. She had been led astray and deserted. She came to the hospital with the impression strongly fixed on her mind that she should die. I saw her in the early stage of labor, and as it seemed that there would be some hours to spare I left her for a time to visit other patients. When I returned I found that she had had convulsions, and been delivered with forceps by a physician who had been called in my absence. She had no convulsion after my return, but profuse hæmorrhage. This was stopped, but the next day she had peritonitis, with great tenderness of the abdomen. She died within the week. No post-mortem. Cause of peritonitis, therefore, not known. After her death the room was cleared and cleaned, and the walls were whitewashed. All bedding was either burned or disinfected by boiling or exposure to fumes of burning sulphur. The persons and clothing of all attendants were disinfected. No case of labor was allowed in the house for three weeks. There was no second case of puerperal fever.

There has been no other death among the lying-in women since the hospital was opened. A very good record, I think. I regret that notes of all the cases in detail have not been kept, but as, for various reasons, this has not been done, I give only such facts as may be relied on as correct. Statistics carefully gathered from well-kept notes are doubtless the most valuable contribution to our general knowledge, but impressions, the result of experience, are, I think, not without their value.

It will be interesting to note some of the circumstances under which these 550 labors have occurred.

The house is an old one, built of wood, before furnaces were in use, and, therefore, with open fire-places. It is L-shaped, having two stories, with a French roof, superadded by the Sisters, which makes it really three stories.

In this third story is the children's dormitory, and a room for infants, also one small room used when it is desirable to isolate a patient.

The hall, with stairway, is in the wing of the building. The lying-in room, in which are four beds, is also in the wing, on the second floor. It is a room eighteen feet by sixteen feet, with bath-room attached. The lying-in room and a small room adjoining are warmed by open fires. There are two windows on the south side, and one on the north. Kitchen in the basement. Wash-room adjoining. Sewage into cess-pools. The whole house covers an area of not over 1500 square feet.

Number of occupants: Sisters, six; hired women, two; children, thirty to fifty; infants, twenty to thirty; women waiting, in the beds, and convalescent, twenty-five, more or less. There have sometimes been as many as one hundred persons in the house, including all ages; seldom or never less than eighty. I should add that the nearest building is not less than one hundred feet from the house.

We have had children in the house, from time to time, sick with diphtheria, scarlet fever, measles, and the usual diseases of summer.

One of the Sisters superintends the lying-in room. The nurse or midwife has herself been a patient. The Sister, by the rules of her order, is not allowed to put her own hand to the special work of the nurse.

From September, 1874, to March following I attended all the patients myself as I would in private

[1] Paper read at a meeting of the Dorchester Medical Club, and communicated, by request, to the Obstetric Society of Boston, January 10, 1884.

practice. Since that time several of the Dorchester physicians have been in attendance when called on. I say when called on, for most of the women have not been attended in labor by any physician, the nurse and Sister managing this themselves unless there is especial need of help. Should the labor be tedious, the presentation not understood, should there be hæmorrhage, retained placenta, or any complication calling for help, the physician is sent for.

The usual course pursued is this: At the proper time the nurse examines the patient, and if she feels the head distinctly she infers that all is right. She waits until the child is born, and, after tying the cord and removing the child, lays her hand on the fundus, and follows the uterus as the placenta is expelled. She never introduces the hand to take it. If this is necessary she sends for the physician, but it is very rarely needed. The perinæum is not supported. Ether is not used unless especially indicated, and then only by the physician. Persulphate of iron, ergot, brandy, ether, and a hypodermic syringe are always at hand. The Sister understands their use. After the child is born and the placenta expelled the mother is left undisturbed for an hour, sometimes longer. Not until she is rested is the bed cleared and the binder applied. The after-treatment is simple. For the last few years vaginal injections of Labarraque's solution, largely diluted, have been used for a week, more or less, according to circumstances. The bowels are generally moved on the third day by castor-oil. Of course cleanliness is enforced. Cold water to drink *ad libitum*. Simple diet. All may be summed up in two words, non-meddlesome midwifery.

Thinking of these facts I am confirmed in the impressions which more than thirty years' experience has fixed on my mind, namely, that labor, *as a rule*, is a natural, healthy process, not to be interfered with or helped, only waited on, although I well know that there are many exceptional cases which tax all the resources of the best instructed; that the duty of the physician is to stand ready for emergencies; that we, all of us, are too ready to interfere where interference is worse than useless.

I have lately read, in a New York journal, an article written by a teacher of high authority, in which he gives a formidable list of what the accoucheur should take to the lying-in room. I have not the journal at hand, but recollect that the writer says we should go as to a "capital operation." I at first, by mistake, read it "capital punishment," and I must believe, if thus equipped, this would be the truer word.

AN EPIDEMIC OF TYPHOID FEVER AT A SUMMER HOTEL.

BY L. F. WOODWARD, M. D., WORCESTER, MASS.

THE Black Mountain House, which was destroyed by fire February 17, 1884, was situated in Camptonville, twelve miles north of Plymouth, N. H. It contained accommodations for one hundred and twenty-five guests, and was crowded throughout the whole of July and August.

There had been no sickness until the latter part of July, when a little girl was brought to the hotel with what proved to be a mild case of typhoid fever, hardly severe enough to keep her in bed. She recovered perfectly, and returned home August 30th. No precautions were taken to disinfect the stools, and the other guests were not informed of the nature of the disease. August 30th some of the guests had been complaining for several days of headache and malaise. During the next few days ten of them came down with symptoms of typhoid fever. The hotel was immediately closed, and all that were able to travel were sent home. Four of the guests, however, were too sick to be moved. One of these developed cerebro-spinal meningitis, and died after an illness of eight days. Two of the others, a brother and sister, remained in Campton until the end of the second week, when they were removed to their home in Haverhill, upon beds, without any serious consequences following. The last of the four remained in Campton until she recovered.

The rest of the guests separated in all directions. One party *en route* for Savannah only reached New York, where two of their number went to the Roosevelt Hospital, one with typhoid fever, the other with cerebro-spinal meningitis.

Another lady, living in New York, could only reach Worcester, and was obliged to remain there for several weeks with typhoid fever.

One Boston family had three out of five members sick.

A Newport family had four out of five ill. Of the two Taunton families one had three out of four, the other four out of five, members down with the same complaint.

A Providence family of four had three members sick. One young lady died of typhoid fever in Boston, and four others were sick with the same disease in different cities. Four of the servants of the Black Mountain House were also sick.

In all there were thirty cases of typhoid fever, with one death, and two cases of cerebro-spinal meningitis, with one death.

As far as I could learn, the district had been free from epidemics of typhoid fever for several years, and there had been no case of this disease in town during the summer. The record of deaths in the village shows only one death from this cause in fifteen years.

A careful examination was made of the hotel, water supply, milk, and vaults. The water used came from a spring situated on a hill, one half mile from the hotel, and one quarter of a mile from the nearest dwelling. The spring is on higher land than any of the houses in the village, and the water was carried to the hotel through wooden pipes, with a fall of about one hundred feet.

Occasionally a small quantity of water was used from a neighbor's well, about one hundred and fifty yards from the hotel, and within fifty feet of a dwelling. The milk was either furnished by cows kept in the hotel stable or from a farm in the neighborhood where there had been no sickness.

The hotel itself was built on a sandy soil, and was situated in a high valley. The privy contained no vault, the discharges being allowed to fall upon the surface of the ground. Loam was thrown in upon them twice a day. The liquids soaked into the soil. The solids were shoveled out as often as necessary. There was no drain or cess-pool, and all liquids from the house drainage were also allowed to soak into the ground in the immediate neighborhood of the hotel. Still, although the house was crowded to its utmost capacity, there was no sickness until a case of typhoid fever was

imported. No care was taken to disinfect the discharges of this patient, and they were thrown into the common vault. The result was, that in about four weeks thirty cases of the disease occurred among the guests of the hotel.

The conditions for a typhoid epidemic being so well fulfilled, it would be exceedingly interesting if we could find the vehicle by which the contagion was conveyed. But here we can only exclude the most common, namely, water.

Dr. L. P. Kinnicutt, of the Worcester Free Institute, made analyses of the spring and well waters, and found both pure and free from contamination with fæcal matter. The result of his analysis is as follows: —

Chlorine 2.3 mg. in litre, or 0.2 parts in 100,000.
Free ammonia, .003 mg. in litre, or 0.03 parts in 100,000.
Albuminous ammonia under 1 mg. in litre, or .1 part in 100,000.

Series of cases like the above are interesting in showing how, under favorable circumstances, the neglect to disinfect the discharges of a single patient may give rise to an epidemic.

The sick guests separated in all directions and carried the disease into twelve different cities and towns. Whether they in their turn spread it still further I have been unable to learn.

RECENT PROGRESS IN DISEASES OF CHILDREN.

BY T. M. ROTCH, M. D.

PAVOR NOCTURNUS.[1]

Dr. Oscar Silbermann, after carefully reviewing the opinions of those authors who have written about the "night terrors" of children, finds the greatest diversity of views expressed concerning the ætiology of the disease, some contending that it is an irritation of the cerebral substance, and others a disturbance of digestion, which produces a certain group of symptoms, best represented, however, according to the investigations of Silbermann, by the general term "pavor nocturnus" provided that we recognize two forms of the disease, namely, an idiopathic and a symptomatic pavor nocturnus. By idiopathic pavor we understand a disease *sui generis*, originating primarily in the brain, and running its course in the central organ of imagination (cortical substance). The symptomatic pavor is a reflex neurosis characterized by dyspnœa and anxious crying, and especially caused by irritation of the vagus. The former is the most frequent, and attacks children between the ages of two and six who are delicate and easily excited, but mentally bright. The symptoms are somewhat as follows: After the child has eaten its supper with a good appetite, has gone to bed, and has slept for two or three hours, it awakes with a cry, sits up in bed with wide-opened eyes, and wrings its hands or wards something off with them; its face is often very red and covered with perspiration; the respirations and pulse are somewhat accelerated; the temperature is normal. The child is unconscious, and does not heed the soothing words of those who are around it. After ten or twenty minutes it becomes quiet, begins to cry, recognizes its friends, asks for a light, and then usually goes quietly to sleep, and in the morning has no recollection of what has occurred. No organic cause can be found for this group of symptoms, and it is rather to be sought for in the impressions made on the child's mind during the day. Anæmia, rachitis, and other constitutional anomalies are doubtless predisposing causes, but often fail to be found, the conspicuous feature of the disease always being an expression of fright. Dread may be objective or subjective, and there seems to be no doubt but that in the idiopathic form of this disease it is objective. The symptomatic pavor is usually found among children who are strong and are free from constitutional disease, and from a nervous temperament, some indiscretion of diet appearing to be the cause of a group of symptoms described as follows: The child eats its supper and goes to sleep as usual, but is soon noticed to be very restless, cries out, grinds its teeth, sucks its mouth, its eyes are half closed, and at times it breathes long and deeply. After this uneasy sleep has lasted for an hour or two it wakes up with an anxious cry, suffers from dyspnœa, and utters short interjections as ah! ah! instead of the words representing the object of its imaginative fear as in the idiopathic pavor. The attack does not last so long as in the other form. The pulse is irregular while the dyspnœa lasts, and then the child goes to sleep again, but is usually restless for the rest of the night, and the attack may recur several times in the same night. These children are also very apt to complain in the night of pain in the epigastrium, and on the next day to be found with a coated tongue, some fetor of the breath, and, perhaps, an attack of vomiting or diarrhœa. As in the other form there is no recollection of the attack on the following day.

An analysis of this second form of attack shows that it comes on slowly, gives premonitory signs of its approach, and lasts a shorter time, two to six minutes, the idiopathic form being sudden in its onset, and lasting from ten to forty minutes. The fear in the symptomatic form is evidently caused by the dyspnœa, and the dyspnœa and irregular pulse by irritation of the vagus. Silbermann then reports eleven cases: of these two were three years old, three four years, two five years, two six years, one seven, and one eight. As a summary of his article he presents the following conclusions: (1.) There is a well-marked distinction between the idiopathic and symptomatic forms of pavor nocturnus. (2.) While fear is common to both it is in the idiopathic form objective, and in the symptomatic subjective. (3.) The idiopathic pavor is a disease *sui generis*, characterized by a transitory hallucination expressing objective fear, caused by abnormal irritation of the brain, and always accompanied by a defect of memory. (4.) The symptomatic pavor is a reflex neurosis from the gastric fibres of the vagus to the pulmonary terminal fibres, thus causing dyspnœa and expressions of subjective fear; we here also have amnesia.

[1] Jahrb. f. Kinderheilk., xx. Band, 3 Heft.

INCUBATORS.

A. Auvard,[2] interne at the Maternité in Paris, has written a paper on this subject, entitled, De la Couveuse pour Enfants, a review of which with illustrative plates is to be found in the March number of the *Edinburgh Medical Journal*. The writer describes the incubator devised by Professor Tarnier and used for two years in the Paris Maternity. It consisted of a chamber for containing the child, fixed over a reservoir of water kept always at a suitable temperature. This was considered

[2] Archives de Tocologie, 1883.

too cumbersome for private practice, and Auvard substituted a more simple form, consisting of a wooden box with a shelf in it, on which the child is placed. A sliding door at the bottom of the box allows the introduction of hot water bottles beneath the shelf, and another small sliding door permits fresh air to continually enter the box. A wet sponge keeps the air moist, and the hot air passes out at the top of the box by an aperture which may contain an indicator, and a glass window at the top of the box by opening and shutting is used to prevent the air from getting too hot. Three hot water bottles filled with boiling water are placed beneath the shelf, and in half an hour the temperature will be about 32° C. In two hours a fresh bottle is added, and afterwards, every hour and a half or two hours, the cool bottles are replaced by hot ones. Budin, in La Charité Hospital, uses an incubator heated by gas which has a Regnard's regulator and an electric bell alarm to draw the attendant's attention to any undue change of temperature. Winckel has employed permanent warm baths, and Auvard admits that these are somewhat more effectual than the incubator for cases where there is a decided diminution of the bodily temperature. Full directions are given in the paper for the feeding, clothing, and care of the infants treated in the incubator, which should be referred to by those who wish to employ this method of treatment. As to the results obtained, Dr. Auvard divides the cases, numbering 151, that have been treated, into two classes: first, all children with an initial weight of less than 2000 grammes (roughly four and one half pounds), and, second, children born in a weakly condition from such causes as syphilis, cardiac malformations, œdema, etc. Cases of the first class alone are capable of comparison with children brought up in the ordinary way, and of these a few examples are given. A child of six months and six days intra-uterine life, and weighing 1720 grammes, was kept for forty-six days in the incubator, at the end of which time it was taken out alive and healthy. A child six and one half months, and weighing 1820 grammes, was kept in the incubator five days and was then taken out well. With like result a child of 1630 grammes was kept in eleven days, and a child of 1530 grammes nine days. A seven months' child, weighing 1400 grammes, was taken out in good condition after twelve days in the incubator. In reply to the objection that children of even 1100 grammes have been reared by ordinary means, Dr. Auvard says that such cases are extremely rare and have resulted satisfactorily chiefly from the immense amount of care and trouble that have been bestowed upon them, trouble which is reduced to a minimum by the use of the incubator. He gives the following statistics to prove the value of this method, and the table shows strikingly the value of the incubator for premature children: —

INFANTS WEIGHING LESS THAN 2000 GRAMMES AT BIRTH.

Incubated.	Without Incubator. Cochin Maternity, 1882.	Without Incubator. Paris Maternity, for two years previous to its use.
Lived.....49	10	46
Died.....30	20	76
Total..... 79	30	122
Mortality 38%	66%	65%

INTERRUPTED PSYCHICAL DEVELOPMENT.[1]

The following abstract in the *American Journal of Obstetrics* is taken from the Nineteenth Report of the Hospital at Berne, where Professor Demme prefaces his clinical report with a statement of the normal development of the power of standing, walking, speaking, and thinking. His conclusions are drawn partly from the works of Vierordt, Kussmaul, and Preyer, partially from his own experience. He finds that (*a*) very strongly developed sucklings will balance the head well in the twelfth or fourteenth week; (*b*) children of medium strength in the fourteenth to sixteenth week; and (*c*) weak children in the eighteenth to twenty-second week. That (*a*) can stand, when supported, in the thirty-fifth to thirty-eighth week, and entirely alone in the fortieth to the forty-second; (*b*) not till the forty-fifth or forty-eighth week; and (*c*) in the first part of the second year. Children who have older brothers and sisters learn to walk much earlier than those who have none, earliest at the end of the ninth month, often between the twelfth and eighteenth month. Children begin to speak at the end of the first or beginning of the second year, — boys later than girls, — and to relate what they have seen or done only at about the end of the fourth year. Demme's clinical observations included cases in which a normally advancing development was interrupted suddenly by some acute disease and afterward advanced again rapidly enough to make up for the lost time, and those in which, under the influence of acute disease, there were abnormalities of development.

(1.) A boy of good size, born asphyxiated, developed normally until the end of the fifth month. He then began to sleep a great deal, was apathetic, and up to the end of the year there was an absolute stand-still in mental development. He then became brighter, played, laughed, and cried like a normal child, began to make rapid progress, in the fourteenth month could sit up, in the eighteenth could stand, and in the twenty-seventh could walk well. There had been no pause in the physical growth. He did not speak until the end of the third year and then only in whispers, but from then on the speech rapidly improved. At the end of the fourth year there was again a disturbance of speech and a return of the sleepiness; but this passed off in a few months, and from that time the child made good progress.

(2.) A large boy of healthy parentage, developed normally till the end of the third month. From this time he had tremors of the hands, the feet, and later of the whole body, with slight opisthotonous and stiffness of the neck. No fever. His mental development was at a stand-still, and he had permanent flexure of the upper extremities. In the forty-fifth week the attacks were less frequent, in the forty-seventh they ceased, and then the intelligence seemed again to waken. At the end of five years he was about as far advanced as an ordinary child of three years. Professor Demme states that early in the boy's life the parents had given him a good deal of opium.

(3.) A strong boy of healthy parentage, developed normally to the fifth month; his father then discovered that he could not distinguish sweet, bitter, salt, or sour by the taste, and that the strongest and most offensive odors had no effect on him. His sight, hearing, touch, and physical development were normal. At the end

[1] American Journal of Obstetrics, October, 1883.

of two years taste and smell were still entirely wanting. The child had a wonderful appetite and would devour large quantities of the most offensive things. In the thirtieth month he had a severe attack of scarlatina which lasted two months. After this the speech was very slow, monotonous, and finally completely aphasic. Hearing was very acute. The aphasia lasted three weeks, and it was several months before the child spoke as well as before the fever. It was then found that taste and smell were normal, and the ravenous appetite had disappeared.

(4.) Was a case of club-foot where, from the fifth to the seventh month, there were occasional right-sided convulsions, with loss of consciousness, opisthotonos, etc. After this the intelligence of the child developed very slowly, but at the age of seven years he was about as far advanced as a child a year or two younger.

ALBUMINURIA IN CHILDREN.[1]

M. Leroux, as the result of researches on the urine of 118 girls and 212 boys in the Hospice des Enfants Assistés, has found that in the case of children affected with marked albuminuria the qualitative alteration appeared pretty constant and independent of the time of the examination, while where there was only transitory albuminuria he found that it was in the afternoon between one and three o'clock, that is to say, after a full meal, the reagent at this time producing a more or less marked reaction, whilst equally fresh urine in the morning only gave negative results.

CONGENITAL MALARIA.[2]

Dr. W. T. Taylor reports the following case, which is of interest in connection with the abstract of Dr. Leroux's article which appeared in the *Boston Medical and Surgical Journal*, January 25, 1883. Mrs. A. R. during her second pregnancy was affected with malarial fever, and although she was then residing at the seashore was obliged to take occasional doses of quinine to control it. She returned to her city residence at the end of the season, and continued using quinine from time to time until the end of her gestation, which was completed in November, 1883, when her infant was born. Her labor was natural and easy, and she had no unfavorable symptoms. The infant appeared healthy and was of good color, but was smaller and more feeble than her first-born had been. The baby soon drew the breast vigorously, as there was a plentiful supply of milk. About one week later the nurse called Dr. Taylor's attention to the fact that the infant occasionally had attacks characterized by coldness of the skin, feeble circulation, and prostration, which continued for fifteen or twenty minutes and were followed by a clammy perspiration. The application of heat to the body and giving it a little brandy and water would revive it. These symptoms appeared to have a periodicity occurring every two or three days, and as they were considered malarial quinine and valerianate of iron were given to the mother, which soon caused the symptoms to cease, and the baby became well and fat. The infant also took small doses of the elixir of cinchona for several weeks. Dr. Taylor considered that the disease must have been contracted in utero, for the infant was born in a perfectly healthy locality where it had not been exposed to any external malarial influence. When labor began the quinine was stopped and was not resumed until the condition of the infant required it, when it quickly arrested the symptoms, and the patient is now perfectly well. Dr. R. P. Harris reports a similar case to the above, where the infant was also treated through the mother's milk with quinine.

[1] Medical Record, March 15, 1884.
[2] New York Medical Journal, March 15, 1884.

TRISMUS NASCENTIUM.[3]

Dr. J. F. Hartigan has written an exhaustive article on this subject, based on a series of 229 cases and numerous post-mortem examinations, in which, after stating the views of the many authors who have described the disease, he says that there is a remarkable uniformity in the pathological appearances found at the autopsies, namely, a congestion of the brain or spinal column (more commonly the latter) or both, with extravasation, and there was no other lesion observed internally except engorgement of the lungs. These results were so marked that it seemed to the author as if some violence or mechanical cause was required to produce them, and directed his attention to the theory promulgated by Dr. J. Marion Sims over thirty years ago, and held by him up to the time of his death, that trismus nascentium was caused by undue pressure of the occipital bone on the brain, and it is this theory which Hartigan endeavors to prove to be correct by additional facts which have come under his notice. In his analysis of the different causes for the disease cited by writers on the subject he shows that their theories are most diverse and contradictory, and that the two which are most worthy of mention are irritation from the umbilicus at the time of the separation of the cord and the above-mentioned pressure of the cranial bones. A large amount of evidence is brought forward by its author against the theory of umbilical irritation, such as the absence of any anatomical lesions which point to the umbilicus as the origin of the disease; the occurrence of cases where the umbilicus is in an abnormal condition and yet no trismus appearing — evidence showing that while there may be such a thing as tetanus due to injury of the umbilicus yet this is not trismus nascentium, and that the latter can scarcely ever be traced to disease of the umbilicus. Hartigan agrees with the statement made by Dr. Sims in his second paper on this subject published in 1848, "that trismus nascentium is a disease of centric origin, depending on a mechanical pressure exerted on the medulla oblongata and its nerves; that this pressure is the result, generally, of an inward displacement of the occipital bone, often very perceptible, but sometimes so slight as to be detected with difficulty; that this displaced condition of the occiput is one of the fixed physiological laws of the parturient state; that when it persists for any length of time after birth, it becomes a pathological condition capable of producing all the symptoms characterizing trismus nascentium, which are relieved simply by rectifying this abnormal displacement and thereby removing the pressure from the base of the brain."

He also describes a class of cases called chronic trismus, where the displacement is very slight, and cases where an opposite condition of affairs exists, namely, where by prolonged lateral decubitus, the occiput being exterior to the parietal bones, the latter are pressed inward. Hartigan divides his reported cases into three classes: (1) those that recovered under postural treatment; (2) cases in which post-mortem examina-

[3] American Journal Medical Sciences, January, 1884.

tions were made, many of which were seen before death but too late to render any service; (3) those whose history was obtained after death, the majority also having been seen before fatal results ensued but where post mortems were not permitted. The table showing the record of 229 deaths was made up of cases under a month old, and there were 150 post mortems.

An analysis of these cases shows that the disease occurs as frequently in the winter as in the summer, that sex had nothing to do with the disease, that the colored element largely predominates, and that no identity exists between this disease and tetanus in the adult. The shortest duration of the disease was one hour, the longest thirty days. The author then proceeds to describe the mechanism of the pressure theory. Before birth the child's head has for its pillow the soft cushion of the liquor amnii. At birth, and for some time subsequently, the cranial bones are not united, are thin, and are without diploë. It is reasonable to suppose that the transition to a different usage will cause them to be easily displaced or the occiput to be depressed, the degree and character depending upon position or management. The child may be retained in the recumbent posture on a hard mattress, or a bunch of clothes, as Dr. Sims says, "wadded up and stuck under the occiput," and interesting cases are cited where removal of these exciting causes occasioned immediate relief from the urgent symptoms. It is not always necessary to the development of the disease that the displacement of the cranial bones should be marked or visible, for from continued decubitus unpleasant symptoms may arise which subside when the child is taken up, and recur again when it is laid down. Dr. Baldwin has claimed that the variations in the post-mortem appearances are not consistent with Dr. Sims's theory, but these are explained by the varying degrees of pressure. In all cases there was congestion of the posterior part of the brain or cord or both. In rapid cases there were coagula in the upper part of the canal in the cavity of the arachnoid, these coagula being sometimes absent in cases so rapid that death was really caused by asphyxia, as shown by congestion of the lungs, etc. In some cases the postural treatment is not sufficient and the depressed bone must be raised. Hartigan believes that many still-births are due to this same occipital pressure. He calculates that 25,000 children die annually in the United States from this disease, and he believes that many cases might be saved by manipulation of the cranial bones so as to relieve the cerebral pressure, though he admits that it is often exceedingly difficult to prevent the bones from slipping back into their original position and thus causing a recurrence of the symptoms.

— At the monthly meeting of the New York Medico-Legal Society, held April 9th, a paper was read by Dr. J. G. Johnson, of Brooklyn, on Poisoning by Canned Fruits and Meats. Representatives of the canned goods manufacturers and editors of several of the trade newspapers were present, and refutations of some of the statements in the paper were made by these.

— A case of sporadic cretinism, with appearance of myxœdema, was reported at a recent meeting of the Medical Society of London.

Reports of Societies.

BOSTON MEDICO-PSYCHOLOGICAL SOCIETY.

WALTER CHANNING, M. D., SECRETARY.

The Society held its twenty-first regular meeting at the house of Dr. J. H. Denny, February 7, 1884, Dr. Fisher occupying the chair.

Dr. Edward Cowles read the paper of the evening, entitled

A CASE OF HYSTEROID CONVULSIONS,

of which the following is an abstract: —

Mrs. A. B., twenty-seven years of age, admitted to the McLean Asylum in 1881. Has been under the care of Dr. Minot, of Boston, her family physician. Maternal uncle insane. Was of a nervous temperament when young, but fairly healthy. At the age of seventeen had a hysterical attack, followed by unconsciousness, owing to fright. During the following three or four years until her marriage had occasional attacks of unconsciousness which were called *petit mal*. These were apt to occur when her emotions were excited. She could ward off an attack for hours or a whole day when she knew one was impending, but it would usually occur sooner or later, as she yielded to its influence upon lying down at night, and it would be followed by sleep. The attacks were most apt to occur at a menstrual period, when she was nervous or restless; were milder between such periods. There was no struggling or movement in them.

Married in 1876 at the age of twenty-three; has three children. The last born six months before entrance to asylum. During pregnancies had added symptoms of pressure and pain in the head; then excitement sometimes followed the attack, making it necessary to hold her on the bed. The attacks occurred only at night, and only in presence of her husband, being successfully resisted at other times and concealed from other persons. Between pregnancies better than ever, attacks being infrequent and brief.

In third month of last pregnancy (ten months before admission) pressure and pain in head began, and seizures became more frequent, occurring several times daily, and sometimes lasting for an hour. Were more apt to occur if she was irritated or annoyed. These attacks were characterized by occasional rigidity of limbs and body, sudden starting movements and opisthotonos, and could often be arrested by suddenly seizing hold of her, blowing in her face, etc. She took, as she had before in her pregnancies, laudanum and stimulants, and added to them ether, chloroform, and chloral for the relief of pain and nervousness, but not habitually.

After last delivery had many seizures. Two weeks before admission pain in head and nausea. Accidentally fell down a flight of five steps backward, striking on back of head, which caused increased pain and nausea. Sometimes felt a desire to seize and hurt any one who came near her; also irresistibly drawn to throw herself out of a window, to get away from every one. The previous summer felt impelled to get out of window; the rays of the moon reflected from the water seemed to invite her to walk out upon them. The asylum gave her a sense of security and a feeling that she could do nothing harmful. Once had a suicidal desire to use a penknife, fearing she might be pregnant.

The patient is of unusual refinement and intelli-

gence, a good musician, of amiable disposition, and very fond of her children. Has suffered mental strain from various causes.

Menstruating when admitted to the asylum; was quite rational, and not much excited; in fair physical condition. Menstruation continued for seven days; had several brief periods of unconsciousness. Pulse 70, not perceptibly altered. Was given chloral, bromide of potash, elixir valerianate of ammonia. Slept fairly, though restless at night, with pain in head and apparent fright.

After menstruation ceased was better for a while, though nights were still poor. Several times on point of becoming unconscious, but warded it off by effort. At this time she was given nitrite of amyl to inhale, which put her to sleep and overcame the ill feeling or nervousness.

Two weeks after admission a seizure occurred as a result of something unpleasant said to her; appeared unconscious; lay in bed with eyes wide open, fixed, pupils dilated; very slight movement on touching conjunctivæ. Pulse 124. Under influence of nitrite amyl came to herself in an hour, after a series of partial relapses and actions of a purposive character. During the following month a similar condition was produced experimentally by causing her to look fixedly at a piece of paper held before and above her eyes.

During second menstruation attacks frequent and mild. A month later several severer attacks immediately before menstruation. In this and subsequent attacks would sit up in bed; jump off from it; dance about; whisper; laugh hysterically, etc.

After a few months, being somewhat better, went away for a visit, during which seizures returned with melancholia, suicidal propensity, etc., and she nearly threw herself from a fourth-story window, and was returned to the asylum after five months' absence.

During the following six months attacks occurred at frequent intervals, being of about the nature of those described above, a constantly recurring symptom being pain in left iliac region. About a year after first admission to the asylum was better than for two years, even going through menstruation once or twice without an attack; attained a greater weight than ever before. She soon began again, however, to have the attacks, and they became worse than before, and were brought on by lesser causes. In the autumn had lost much flesh and was unable to sit up without vertigo and nausea. She had hallucinations of sight, which continued for some months.

As a summary of the events of three years, in brief it may be said: There was improvement for two months; then development of disease outside of the asylum for five months. Then improvement for nine months followed by nine months of development of more serious symptoms than ever, with complication of painful inflammation of ears, requiring continuous use of morphia, hallucinations, delusions, danger of death by exhaustion, and general and painful cutaneous hyperæsthesia, etc. Again, during nine months to the end of 1883, gradual and remarkable improvement in general health and appearance, but with recurring severe attacks at menstrual periods, accompanied by the continuance of their most violent symptoms. Finally during the first month of the present year sudden relapse with the development of a new and dangerous neurosis of the heart. In one attack death seemed imminent. These attacks recurred in February.

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Conclusion. The earlier history of this case led to the diagnosis of *petit mal* with a hysterical element. Later this was necessarily modified. There is a dissimilarity from hystero-epilepsy as described by Charcot, Richet, and others. The attacks do not begin with a convulsive seizure closely resembling true epilepsy. There is not a general severe tonic spasm, though tonic rigidity may occur later. There is no deviation of the head, or clonic spasm succeeded by coma and stertor. In the second stage the semi-purposive acts do not resemble the violent coördinated spasm, bounding movements, etc., and the opisthotonos is mild and accompanied by only mild tonic rigidity. In the third stage, however, there are the mental and emotional disturbances, with manifestation of joy, anger, irritation, the stage of delirium, and finally there are at times the terrifying visions.

Comparing the symptoms of the case with Gower's table of diagnostic characters of epileptic and hysterical fits, the former bear out the diagnosis of hysteroid convulsions. The most important indications are that the attacks are influenced by the patient's psychical condition, — the initial pseudo-epileptic phenomena may occur repeatedly during the progress of the fit, showing that they are actually part of the hysteroid attack, — and the cessation of these recurrences when the fit is cut short by treatment. Charcot's crucial test, compression of the ovaries, was sometimes successful, but usually failed to arrest the attacks, as is common in this country and England. According to Charcot, also, it is significant that in the intervals between and in the midst of the attacks there is no evidence whatever of the mental impairment to be expected from so long and severe a manifestation of epileptic symptoms.

The attacks being regarded as hysteroid, and being so distinctly associated with the menstrual function, the question has arisen of the propriety of removing the ovaries and Fallopian tubes. In view of the increasing seriousness of the patient's condition, and the hope of ameliorating the symptoms attending menstruation, should ovariotomy be performed?

In the discussion which followed the reading of the paper of Dr. Cowles, Dr. Jelly said: I am very glad to hear Dr. Cowles's paper, as I saw the patient in consultation with Dr. Minot just before she was committed to the McLean Asylum.

She was in a feeble condition of health, had a child but a few months old, and had had several seizures resembling *petit mal* (from the description given, I did not see her in one). She had had one or more on the morning of the day on which I saw her. Following this she had given them much trouble by attempting to throw herself from the window with suicidal intent.

At the time of the interview she was quiet and ladylike, but a little confused. As she was having the premonitory symptoms of the approach of menstruation, it was decided to wait until it became established before sending her to the asylum, as it was hoped her fear of pregnancy might thereby be relieved. She became more excited in a few days, and the suicidal tendency continuing she was removed to the McLean. I made no positive diagnosis at the time. I have no doubt from Dr. Cowles's careful detail of the history of the case that he has arrived at the correct diagnosis.

It seems to me if the case were one of epilepsy there must have been by this time some weakening of the

intellect, and more effect would have been noticed from remedies which generally are given for the relief of epilepsy.

I saw the patient for a moment last fall during the comfortable period which Dr. Cowles described, and she then appeared very calm mentally.

I have no experience from which to give an opinion as to the advisability of ovariotomy.

DR. PAGE remarked that he was very much interested in the paper of Dr. Cowles, as it had a direct bearing in many of its features to a case now under his care at the Adams Nervine Asylum, wherein the symptoms exhibited were remarkable for their unusual combination. Before describing it, however, he would like to ask Dr. Cowles if he understood him to say that his patient had ever had catalepsy.

DR. COWLES replied that on a few of the occasions where the patient was unconscious the arms and hands may have been made to maintain the position in which they were placed, but the symptoms were not regarded as cataleptic.

DR. PAGE said that there could be no doubt of the correctness of Dr. Cowles's diagnosis, and that it was associated with a mental disease quite distinct from the hysteroid condition, and quite independent of it. The progressive character of the mental element did not, it seemed to him, augur well for recovery. While no one, of course, could definitely state what the result might be, with the association of symptoms as presented by Dr. Cowles, the duration of the case, together with the recurrence of the hysteroid attacks, without assignable cause, unless we accept intra-cranial trouble, not necessarily organic, and the progressive mental implication, he could not but feel that the outlook was extremely dubious. At least his own experience in similar cases had taught him not to entertain hopeful views of recovery. As to the propriety of oöphorectomy, his own knowledge of cases of the double operation he had been able to observe and the ill success attending it made him suspicious of the wisdom of the operation in this particular case. In those with whom he has present acquaintance essentially the same condition exists to-day as prior to the operation. One was followed by persistent vomiting and profound disturbance of assimilation for more than a year; two others have the same train of symptoms as before; and another remains unchanged except in the loss of her ovaries.

His own case was that of a young married woman, of fine physique, cultivated and intelligent, recently admitted to his care, who was now passing through a series of severe hystero-epileptic attacks varied with catalepsy and ecstasy, and associated with total bilateral loss of hearing and loss of speech. He had just left her this evening free from convulsive attacks, but, as a result of them, in great emotional distress because she had become *totally blind*, proof of which was seen by the fact that no reflex action of the eyelids could be superinduced by making sudden demonstration before the eyes, as in the act of striking, and only so by placing the finger on the corneæ. Both pupils were widely dilated. She has also complete hemi-anæsthesia of the right side, with anæsthesia of the parts immediately surrounding the left ear and mastoid. The application of the tuning-fork induces vibratory sounds, noticeable only in the left middle ear, not in the right. Her feet have been all day in a state of contracture, and are only temporarily relieved by the faradic current. Accompanying one of the severe tonic spasms, when the hands, tightly closed, were flexed on the fore-arm as much as were possible, and the face intensely congested, was internal strabismus. On relaxation of the spasm, however, the eyes resumed their normal axes. The case is also especially interesting because it is associated with the opium habit. It was stated, on admission, by the attending physician, that the daily consumption was from half a drachm to one drachm of Battley's solution. An attempt was therefore made, as a means for cure, to break up the habit by withdrawing it altogether. It was not then known that the patient had experienced other than a cataleptic attack about one year ago. The result was severe hystero-epilepsy. During an intermission between one of these convulsive attacks it was discovered that the daily consumption was six grains morphia. To control the spasms, and at the same time to avoid danger from too sudden omission of morphia, forty minims of Magéndie's solution were administered, and this is all she has taken within the last twelve hours, with the effect of controlling the convulsive movements; but, as before stated, the patient has become totally blind in addition to the loss of the special senses already mentioned. The case is also novel because of the limited means of communication with her. Before loss of sight it was by writing on a slate, now by means of the finger alphabet. The patient inherits a neurotic tendency from the father, and since marriage has been subjected to severe emotional strain. At no time, however, save when first clearing up from the last convulsive attack, when internal strabismus existed, has she exhibited any intellectual aberration. I would add, further, that this patient was seen by Dr. C. J. Blake last August, and at that time was having an eczematous trouble with both external auditory canals. The hearing was then absent, and instead of being anæsthetic, as at present, the parts about both ears were hyperæsthetic. Speech was then perfect. Dr. Blake found no disease of the middle ear, but a slight thickening of the tympanum of one ear, and a small calcareous deposit in that of the other. I believe he regarded the loss of hearing as purely hysterical. At all events it has now existed one year.

DR. DENNY said the fact that symptoms ascribed to partial epilepsy were exhibited several years ago, which have since periodically recurred, the habitual recourse to narcotics to relieve pain and spasm, and the continuance of maniacal delirium almost uninterruptedly for months during the period occupied by lactation in ordinary puerperal evolution are points related in the history of the case reported which would lead us to anticipate the development of masked forms of mental and nervous phenomena such as have been manifested. The symptoms consequently have some of the characteristics of epilepsy, ovarian neuralgia, hysteria, and insanity in varying degrees. If true epilepsy exists it would be unreasonable, in my opinion, to attempt to cure it by extirpation of the ovaries, which is in effect an operation on the peripheral nervous system, since epilepsy is essentially a disease of the central nervous system.

The following are some of the symptoms which have a strong likeness to epilepsy: —

The patient will endeavor to ward off an attack by various expedients whenever she feels a warning, aura-like, malaise. This resembles the efforts of epileptics to cut short an impending attack by ligation of a limb, for example, between the aura-sensation and the body.

In any form of hysteria the tendency would rather be to exaggerate than to avert a crisis.

The peculiar dreamy expression of the eyes accompanied by occasional waking-up looks are suggestive of epilepsy, as well as the seeking to avoid falling by lying down in a comfortable, safe place previous to attacks. Such expedients are familiar in epilepsia mitior, and in graver forms when there is a warning aura.

Again, the absence of hemianæsthesia on the side of the irritable ovary, or of any *marked* disturbance of *cutaneous* sensation, would counter-indicate the existence of hystero-epilepsy according to Charcot. If, however, it were certain that deep pressure over the irritable ovary would stop an attack, it would go far towards proving the existence of hystero-epilepsy, whatever anomaly there might be.

In event of the symptoms being those of hysteria in any of its hysteroid or hystero-epileptic forms, or of ovarian neuralgia associated with delirium, involving the sympathetic tracts of the ovarian tubes, that is, functional neuralgia, operative interference would be unjustifiable, as would be the extraction of a tooth for a trigeminal neuralgia, as Drs. Landau and Remak conclude[1] after ably commenting upon a case of their own operated on for hystero-epilepsy which was much exacerbated thereby.

They state that "the diagnosis of functional neuralgia excludes surgical interference not only in distinct forms of the same, but for hysteria, ovarial hyperæsthesia, etc., as has been attempted by ovariotomy. Rosenthal and Neftel have detailed only bad results from such operations."

Professor Tauffer, of Heidelberg, relates[2] a case operated on by himself for combined hysterical and mental symptoms which was succeeded by mania and not by recovery, while another case was followed by dementia, although he says "the operation seemed indicated to prevent this termination." Other cases related by him and by Professor Goodell,[3] of Philadelphia, who anticipates the time when both insane men and women will be operated upon by legal requirement, do not seem to me to justify the mutilation yet.

Dr. Fisher remarked that the evening was so far advanced that he would not discuss the paper, merely stating that as he has always regarded confirmed hysterical insanity, *however* originating, as a disorder of the brain and not of the ovaries, he could not advise Battey's operation except as an experiment, or a *dernier ressort* for the possible effect of the shock or moral influence, or the improved nutrition likely to follow it.

Dr. Cowles said that his narrative of the long series of attacks and varying conditions of the patient had evidently given a wrong impression as to the prominence of mental symptoms, the fact being that all through the history of the case there were clear intervals between attacks, and that the patient appeared sane and well mentally much the larger part of the time. The mental symptoms were distinctly associated with the attacks except on two or three occasions, as when there was a period of painful inflammation of the ears and great physical exhaustion. Even when last in the puerperal state, neither before nor after confinement was there a continuance of delirium, except for a few brief periods. It was associated with the attacks, between which were intervals of mental clearness. The recourse to narcotics could not be regarded as at any time amounting to a habit.

As regards the symptoms that simulate epilepsy, the condition that led to efforts to ward off attacks might exist from one to four days, and while it may be termed an aura-like malaise, it differs from that of epilepsy, and such conditions are common to hysteroid attacks. Seeking to avoid falling, by lying down in a comfortable place, is more common to hysteria than to epilepsy; and the dreamy expression of the eyes might recur many times before the attack is fully developed, and also during the attack, which Gowers thinks is diagnostic. It is most significant that the attacks can be warded off, sometimes altogether, and sometimes be long delayed by exertion, excitement, or by an effort of the will.

It should be stated that when the patient feels comfortable and well an attack, usually the precursor of a series, may be determined in two ways: By some emotional disturbance, or by the onset of pain in the left ovarian region, which once beginning from any cause, as during menstruation or from pressure, will continue and establish the initial condition of malaise. For many years the patient has been in the constant habit of making gentle pressure with the hand upon this region while going to sleep at night. The symptom of hemianæsthesia absent in this case as well as the effect of pressure on the ovaries is said by Gowers to be far less common than in France.

[1] Ein Fall von Ovariotomie bei Hysterischen Hemianæsthesie, Dr. D. F. Landau u. Dr. E. Remak, Zeitschr. f. klin. Med., Bd. vi., Theil 5, 1883.

[2] Beiträge zur Lehre der Castration du Frauen, W. Fauffer, Cbl. f. Nvnhikde, Psychiatrie, etc., No. 16, 1882.

[3] William Goodell, Clinical Notes on the Extirpation of the Ovaries for Insanity, American Journal of Insanity, April, 1882; Cbl. Nvnhikde, Psych., etc., October, 1882.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

Thursday evening, March 13th. The President, Dr. Tyson, in the chair.

Dr. J. H. Musser presented a series of specimens illustrative of Hepatic Pathology. The accompanying paper will be shortly published in another form.

Dr. C. B. Nancrede presented a penknife blade, with the portion of bone transfixed by it, removed from the cranium of a boy aged nineteen years, where it had remained undiscovered for over six weeks. Owing to later developments the history of this specimen is also, for the present, withheld from publication.

Thursday evening, March 27, 1884. Vice-President E. O. Shakespeare in the chair.

CASE OF EPITHELIOMA OF THE STOMACH AND COLON, PRESENTING SINGULAR DIFFICULTY OF DIAGNOSIS.

Presented by Dr. J. H. Packard.

Dr. Packard stated that this case was placed at his disposal for report by Dr. H. M. Fisher, in whose wards at the Episcopal Hospital the man had been.

Alex. R., aged forty-seven, single, was admitted July 9, 1883. He had for about four months been unable to follow his occupation, that of a wagon driver. No history of syphilis; none of his family are known to have had cancer. His first symptom was discomfort after eating; later he had loss of appetite and pain in the stomach. Two months afterward he felt a hard tender mass in his belly, on the right of the umbilicus.

On admission the tumor seemed about the size of an orange, and was found to be on the left of the umbilicus. It was not very painful, but annoyed him. He was much emaciated, and in a cachectic state; his bowels were obstinately confined. Under treatment his condition improved, and he gained notably in appetite and strength. Subsequently a change for the worse took place, the tumor became more painful, he lost flesh and strength, and his appetite failed. As the tumor seemed to be entirely movable, it was decided that an attempt should be made to relieve him of it, and he was transferred to the surgical ward, under Dr. Packard.

October 11, 1883, after consultation, an incision was made over the tumor, in a vertical direction, and the tissues carefully divided until the abdominal wall proper was reached, when it became clear that there was firm adhesion between this and the new growth for a space of several inches in every direction. The operation was therefore abandoned, and the wound closed. Healing took place by the first intention, and the man even thought himself to have been benefited, although this was clearly imagination on his part. Emaciation steadily increased, and toward the middle of November the stomach became unable to retain food. From this time the symptoms progressed until death occurred, December 29th.

Upon post-mortem examination, it was found that there was an epithelioma of the pylorus, which had become adherent to the transverse colon, and the disease propagated to that structure, a communication taking place between the two cavities. Subsequently, by a local peritonitis, the affected parts had contracted adhesions to the parietal peritonæum at the point to which they had been displaced. The mechanism of this displacement does not seem to clearly appear.

MALIGNANT DISEASE OF THE PERITONÆUM AND ABDOMINAL VISCERA.

Presented by DR. JOHN B. ROBERTS for DR. V. HORNET, with an abstract of the latter's notes.

The patient, a woman of about fifty-eight years, had, four years previous to death, an attack of what was supposed to be gastro-enteritis of malarial origin. From this she never perfectly rallied, but had four or five intestinal hæmorrhages, at varying intervals. The last one occurred a few weeks before death. Recently she rapidly lost strength and became emaciated. When seen by Dr. Hornet, some time in December, 1883, she had a large tympanitic abdomen, and complained of a sense of tension. Constipation, jaundice, flushed cheeks. Pulse 100 to 110; normal temperature and a tendency to nausea and dyspnœa were the chief symptoms.

Ten days before death the thermometer in the rectum marked 103° F.; but stood, says Dr. Hornet, below normal in the axilla and under the tongue. Small nodules could be felt through the belly wall, which was less tympanitic than formerly. Death occurred suddenly while at stool.

Autopsy showed nothing important in the chest. The omentum and mesentery were studded with multitudes of tumors varying in size from that of a currant to that of a hen's egg. These were of globular form, firm in consistence, and on section showed a central hæmorrhagic clot. The parietal peritonæum was studded with a few small ones, as was the surface of the liver. Dr. Hornet further says that he found in one part of the intestine an ulceration of the mucous membrane corresponding to an internal tumor, and a tumor on each side of the rectum, high up. In one place he found a cyst, with yellowish serous contents, on the surface of a tumor. Most of the nodules were of a pale pink color; one noticed, however, was nearly black. I present a portion of the intestine and mesentery, and a piece of the liver with one of the secondary growths there found.

MALIGNANT DISEASE OF THE TESTICLE TAPPED FOR HYDROCELE.

Presented by JOHN B. ROBERTS, M. D.

This case is clinically interesting because it resembled a hydrocele, and misled me as well as another surgeon who had previously seen it. When the man came to me I found a large, oval swelling of left side of scrotum, which he gave me to understand had existed for two years. The tumor for six or eight inches long in the vertical direction had a sharply defined upper limit, as does hydrocele of the vaginal tunic, and was indistinctly elastic as is a tense hydrocele. The veins on the surface, however, were well marked, and it looked, at the lower part, a little as if the subcutaneous tissue was about to suppurate. It was this which gave rise to the pain that induced him to seek medical advice at this time, for he has previously postponed having another surgeon draw off the yellow water which he had been told was in it. I did not try to transmit light through the supposed hydrocele because it is very often a fallacious test. At least absence of light transmission does not negative the existence of hydrocele. I accordingly thrust a trocar into it, and drew about six fluid ounces of pure coagulable blood through the canula. Reinserting the trocar I pushed it in various directions, but met only solid tissue and no blood except when it was pushed in the direction originally taken. Then blood flowed in a quite free stream. No marked reaction followed, but the pain and tendency to suppuration was removed.

Two weeks later I removed the mass by enucleation, and found the solid tumor here presented, which is the enlarged and infiltrated testicle. The patient now says that fifteen years ago, when about eighteen years old, the testicle or scrotum began to grow larger. He is rapidly convalescing.

RUPTURE OF ONE OF THE AORTIC VALVES DURING SEVERE MUSCULAR STRAIN.

F. L., aged forty, laborer, married, was admitted into the Episcopal Hospital under my care February 21, 1884. His family history was good, and his own health, previous to his present indisposition, excellent. He denied ever having had syphilis or rheumatism.

His work compelled him to handle very heavy casks, and he had the reputation among his fellow-workmen of being a particularly strong man, he being able to lift, unaided, 500 pounds. Three weeks before admission he was subjected to heavy strains in lifting, and although no history of sudden cardiac pain or palpitation could be elicited, he did admit feeling a sense of tightness across his chest and some dyspnœa after his day's work, These symptoms gradually increased, and cough accompanied by bronchitic expectoration soon made its appearance. On admission the patient presented all the appearances of a remarkably well developed and powerful man; he was suffering from great dyspnœa, which was much increased upon exertion. Percussion showed impaired resonance over both lungs posteriorily, which was not altered by change of posi-

tion, and auscultation revealed numerous moist râles. The apex beat of his heart, although perfectly regular in its rhythm, was extended in its area, and in the nipple line in the fourth left interspace. Auscultation revealed a loud, high-pitched musical murmur, systolic in time, with its point of greatest intensity over the upper part of the sternum; this was also audible over the whole chest. The peculiarity of this murmur was its decidedly vibratory character, like a torn sail flapping in the wind; the patient himself even noticed this.

With the diastole there was a second murmur of much lower pitch and not musical or vibratory in its nature. This had its point of greatest intensity over the aortic cartilage.

There was no apex murmur. Slight œdema of the legs and feet was present. The urine contained no albumen.

The patient was placed in bed, and given digitalis, while counter-irritation and dry cups were applied to his chest posteriorly. Under this treatment he rapidly improved, and was soon considered well enough to be about the ward, the dyspnœa only showing itself after any unusual motion or excitement. The murmurs remained in much the same condition as on admission, although the intensity of the musical murmur had lessened.

On March 20th, in the evening, after a day as well as usual, he was seized with a severe attack of dyspnœa, with congestion of the lungs. He was considerably relieved by the application of dry cups. The next morning it was noticed that the œdema of the legs had increased, the dyspnœa was still present to a slight degree, and the only change perceived in the cardiac signs was a lowering of the pitch of the musical murmur.

On the 22d the dyspnœa had increased again, and for the first time a low, long, apex systolic murmur was detected; this was conveyed plainly into the axillary line. The musical murmur was of still lower pitch than before, and at the aortic cartilage the murmurs were much more plainly of a see-saw character.

Irregularity of the heart's action occurred now for the first time. On the 23d the area of cardiac dullness was as follows: In the horizontal line, at height of nipple, the dullness began in the middle of the sternum, and extended to the left to a point half an inch beyond nipple. In the perpendicular line drawn midway between the sternum and left nipple the cardiac dullness began in the third interspace and extended downward till lost in dullness of left lobe of liver. The area of dullness was not triangular with the base downward. Impaired resonance was now present over the whole chest both anteriorly and posteriorly, and no cardiac sounds could be heard on account of the great stridor and the violent movements of the chest. The apex beat could not be detected for the same reason. After this the patient became more and more cyanotic and short of breath, and died on the same day, namely, March 23, 1884.

Autopsy. Each pleural cavity contained several ounces of serum. The pericardium contained about one and a half ounces of serum in which several shreds of lymph were discovered.

In both ventricles were large clots, partly chicken-fat, extending through the semi-lunar valves.

The weight of heart, after being emptied of clots and blood, was one pound ten ounces.

The walls of the left ventricle were enormously hypertrophied, measuring seven eighths of an inch at thickest part; the cavity appeared slightly distended, as did also the mitral orifice, which would allow the tips of three fingers to pass.

The right anterior leaflet of the aortic valves was torn at its posterior insertion into the aorta, thus leaving a free pointed end about three eighths of an inch long to float in the blood current.

The left anterior leaflet presented two fenestrations, the posterior one the smaller and near the insertion of valve in aorta at its upper margin, the anterior one the larger and situated some distance down from the free border of valve.

The aorta at its origin was atheromatous in places and slightly dilated, a patch existing at the point corresponding to the former insertion of the torn valve. The valves were normal except for slight thickening. The coronary arteries were not atheromatous.

Remarks. In this case the atheroma at the point of insertion of the torn valve must have been the cause of the rupture during a heavy strain; should a fenestration have existed near the point of insertion, as exists in the left anterior leaflet, this would be a further reason for the rupture occurring at this point.

Frequently repeated great bodily exertion was the probable cause of the atheroma, as the man was a moderate drinker and denied rheumatism and syphilis. A point of interest in the case was the peculiar character of the *systolic* aortic murmur, which was, as before mentioned, decidedly musical and vibratory.

As the patient did not suffer from sudden palpitation and dyspnœa at the probable time of the rupture, and as this murmur gradually diminished in pitch, while the regurgitant murmur became slightly more pronounced, it is probable that the tear at first was slight and gradually increased under the great strain thrown upon it, thus increasing the area of the loose edge to be thrown into vibration, necessarily lowering the note produced.

The systolic apex murmur heard one day before death was due to the occurrence of an incompetency of the mitral valves from over distention of this orifice.

NEW YORK ACADEMY OF MEDICINE.

THE REMOVAL OF THE AFTER-BIRTH.

At a stated meeting of the Academy held Thursday evening, April 3d, Dr. H. J. Garrigues read a paper in advocacy of the exclusive adoption of the Credé method in the delivery of the placenta after normal parturition. It was now thirty years, he said, since Credé had published his original communication on the subject, and since the date of this publication he had repeatedly reiterated his conviction of the correctness of his idea that the placenta should be removed, not by traction from below, but through the agency of pressure from above. Having described the method in detail Dr. Garrigues maintained that it was a mistake to practice compression on the fundus except during a regular contraction. At least three contractions were, as a rule, required for the expulsion of the after-birth, and more frequently it was not until the fourth contraction that it came away. Of late years some of the German authorities had claimed that the Credé method was objectionable on the ground that it was likely to result in retention of the membranes, but he contended that there was no foundation in fact for such an opinion.

During the last eight years Dr. Garrigues had used the method constantly in his private practice, and when he was appointed attending surgeon to the Maternity Hospital on Blackwell's Island he had introduced it into that institution. During the last two terms of his service there 408 confinements had been recorded. Two of these had been cases of abortion at the fifth and sixth months respectively, and in both there had been adherent placentæ, which he removed by means of the dull wire curette and forceps. Out of the 408 cases there were six of retained placenta, and six in which a portion of the membranes was retained, so that out of 400 cases the Credé method failed in six, or one and one half per cent. In four, however, there was the occurrence of true adhesion of the placenta, which he believed to be more rare than was generally supposed, most of the cases of retention being due, as he thought, to improper treatment. There were, therefore, in reality only two failures in 400 cases, or one half per cent., there being two cases in which there was simple retention without adhesion. In six cases (or one and one half per cent.) shreds of membranes of larger or smaller size were retained, but in only one of these was it necessary to introduce the hand into the uterus to accomplish their removal. Credé had said that he had never seen any bad effects from leaving such portions of membrane, and advised that they should be allowed to remain undisturbed in the uterus, but Dr. Garrigues strongly deprecated this course as liable to expose the patient to severe hæmorrhage and other dangers. Whenever the membranes could not be removed otherwise, the hand, disinfected with a solution of bichloride of mercury (1 to 2000), was to be carried up into the uterus, and the cavity afterwards thoroughly washed out with the same antiseptic solution.

The Credé method, Dr. Garrigues continued, was modeled strictly after the regular course of nature, and its action was simply to assist nature in completing the normal process of parturition. After the strong expulsive efforts of the uterus during the second stage of labor some atony of the organ was, as a rule, apt to result, and the manipulations comprised in the method had the effect of spurring it on to the still further action required. In the large majority of cases there was, therefore, a call for artificial aid at this stage of labor, and this, there could be no doubt, was better supplied by the method in question than any other plan of procedure. Having spoken of the action of the two sets of muscles entering into the structure and controlling the contraction and movements of the uterus he showed how, in the manipulations of Credé's method, the action of nature was assisted by the compression of the organ between the thumbs and fingers, and the pressure downwards and backwards, forcing it towards the hollow of the sacrum.

By shortening the third stage of labor the method tended to prevent post-partum hæmorrhage. In the 408 cases mentioned serious hæmorrhage occurred in only two, and in but two others was there the slightest loss of blood beyond the normal amount. In all these four cases, however, the hæmorrhage occurred before any attempt had been made at expression of the placenta, so that in not a single instance was there any hæmorrhage after the removal of the after-birth. When properly carried out, therefore, the Credé method was the best preventive of post-partum hæmorrhage. Inversion of the uterus, which was facilitated by traction, was also powerfully counteracted by it. In some instances the whole after-birth was expelled completely outside the genitals, and where this was not the case it was advised that the membranes should be twisted into a rope before their withdrawal. There was, as a rule, no necessity for the introduction of the fingers into the genital canal, and the avoidance of this constituted one of the points in the modern antiseptic treatment of midwifery cases. Dr. Garrigues said that in his own practice he delivered the child while the woman was lying on the left side, but after the second stage of labor was completed he had her turn upon the back as the most advantageous position for the satisfactory completion of the third stage.

In his last published communication Credé stated that in 2000 cases the average duration of the third stage was four and a half minutes. The average time in the 408 cases at the Maternity Hospital on Blackwell's Island was somewhat longer; but while in the lying-in hospitals in Europe the same medical attendant remained on duty for several years in succession, and thus had the opportunity of acquiring special skill in all obstetrical manœuvres, in the latter institution the resident accoucheurs were changed every two months. Still, in his opinion, Dr. Garrigues said, it was totally unimportant whether a few minutes more or less were consumed in the third stage, as long as the correct principles were carried out in the treatment of it.

In making a plea for the orginality of Credé in the method he had advanced (which, he said, had been impugned in certain quarters), Dr. Garrigues claimed that he was entitled to the credit of advancing uterine compression as a means for expelling the placenta because (1) he advised it in all cases; (2) he directed that the uterus should be firmly grasped on all sides; (3) that the whole organ should be pressed downward and backward in the direction of the pelvic axis; (4) that the cord or placenta should not be touched unless there was adherent placenta; and (5) that the fingers should not be introduced into the genital canal. The advantages which he claimed for the Credé method were: (1.) Its certainty. (2.) Its efficiency in exciting uterine contractions. (3.) The prevention of post-partum hæmorrhage. (4.) The prevention of hour-glass contraction of the uterus. (5.) The prevention of inversion of the uterus. (6.) The prevention of avulsion of the cord or uterus. (7.) The prevention of uterine inertia.

There was still another plan of procedure, sometimes called the Strasburg method, which consisted simply in the absence of any kind of interference whatever, and which was as yet but an experiment. In 100 cases reported in which it had been tried, the placenta came away within half an hour in twenty-four cases, within one hour in twenty cases, within two hours in twenty-five cases, within three hours in eleven cases, within four hours in nine cases, within five hours in five cases, within six hours in three cases, within eight hours in two cases, and within twelve hours in one case. In every case it was found that the fœtal surface of the placenta presented first. In two cases there was hour-glass contraction of the uterus, and in one case there was a decided putrid odor. Dr. Garrigues said that he failed to see a single advantage in this method, and that it was not even natural, since the recumbent posture, in which the women referred to were kept, was unfavorable to the spontaneous delivery of the placenta. Dr. Engelmann, in his comprehensive

paper on parturition among savage peoples, had stated that the placenta generally followed soon after the birth of the child. When the latter was delivered the woman was apt to change her position, and if the afterbirth did not readily come away massage was frequently resorted to. Dr. Sussdorf in his account of the labor of an elephant related that the mother, in order to facilitate the completion of the third stage, pressed her abdomen forcibly against the stake to which she was chained.

In the 408 cases at the Maternity Hospital there had been no instance of hour-glass contraction, and this accident, according to the statistics of the best authorities, was more liable to occur where no compression was made than where the Credé method was employed. It was hardly necessary to point out, Dr. Garrigues continued, that it was positively dangerous to allow a placenta to remain in the uterus till it became offensive. On the other hand, there was no necessity for undue haste in delivering the placenta, and all that the accoucheur was required to do was to abridge the third stage of labor in such a way as to keep the patient from danger.

DR. ALEXANDER HUNTER, in opening the discussion on the paper, spoke of the advisability of commencing the uterine compression just before the delivery of the child, and said, in the course of his remarks, that he believed that the uterus should always be allowed to expel the fœtus from itself, and from the vagina also, unless the fœtus were in danger of suffocation. By thus resorting to abdominal pressure early he thought the delivery of the placenta was much shortened, as well as the danger of post-partum hæmorrhage diminished.

DR. HADDEN spoke of the evil consequences that were liable to result from improper management of the third stage of labor, and of the coolness, judgment, and intelligence required in conducting it satisfactorily. During the last twenty-five years he said he had attended about twenty-three hundred cases of confinement, and had never lost sight of the importance of attending with special care to this part of labor, the neglect to do which, if it was not followed by any immediate bad results, might leave the patient a chronic invalid. In his last thousand cases he had had one fatal case of post-partum hæmorrhage, but the patient was the subject of *purpura hæmorrhagica*. For the expulsion of the placenta it had been his practice to depend partly on gentle traction and partly on abdominal pressure. He always took pains to see that the uturus was afterwards firmly contracted, presenting a distinctly globular outline, and was accustomed to watch the patient for at least an hour and a half after the completion of labor. In the only case in his experience in which there had been an attempt at inversion of the uterus the accident occurred before any effort whatever had been made to remove the placenta, and was due, apparently, to a relaxation of the circular muscular fibres while the longitudinal ones were in active contraction. The fundus, to which the placenta seemed to be attached, was thus forced down so that it could be felt through the os, while there was a cup-shaped depression in the top of the uterus as felt through the abdominal walls. Up to that time he had been inclined to believe that traction on the cord might possibly induce inversion of the uterus, but now he was somewhat skeptical on this point, and it seemed to him that the cases which had been reported as of this character were in reality due to the fact that the placenta was attached near the fundus (a comparatively rare condition), and the effort to expel it resulted in the inversion of the organ.

DR. MARY PUTNAM JACOBI remarked that the expulsion of the placenta was being prepared for all through the later weeks of utero-gestation by the formation of thromboses around its edges. Up to that time the uterine circulation was predominantly venous, but when the time approached when the uterus was expected to undergo the active contractile efforts which were necessary for the expulsion of its contents the circulation gradually became more and more of an arterial character, through the formation of these thromboses and the migration of leucocytes, which caused coagulation and tended to cut off the supply of venous blood. The stimulus required for exciting uterine contraction could be supplied alone by arterial blood, and hence it seemed probable that in those cases in which there was a failure to contract there was an abnormal continuation of the supply of venous blood. The Credé method had the direct effect of diminishing the amount of venous blood going to the uterus, thus continuing the process already begun in the ordinary course of nature, and she believed that it was the only plan of procedure to be thought of at the present day.

DR. MUNDÉ, who had arrived too late to hear the paper, made some general remarks on the Credé method, in which he went over much of the ground covered by Dr. Garrigues. In the course of them he remarked, however, that after expression had been made, and the reduced size and spherical form of the uterus, as felt through the abdominal walls, indicated that it had left the cavity of the organ, the placenta sometimes did not appear at the vulva. In such cases it was probably retained in the cervical cavity (the cervix being of exceptional length), and no amount of pressure on the fundus would cause its expulsion. Here slight traction on the cord, or, what was safer, the introduction of the fingers or hand into the vagina to get hold of the placenta, was advisable, and if the ordinary rules of cleanliness in obstetric practice were observed he did not believe that the slightest danger could result from this procedure. Where the placenta was retained simply by the firm contraction of the os, as sometimes occurred, he recommended that its relaxation should be secured by the administration of chloroform. In some cases the repeated compression of the uterus required by the Credé method gave the patient more pain than was at all desirable, and here he thought it well to follow this up with gentle traction on the cord. Dr. Mundé was strongly opposed to leaving the delivery of the placenta entirely to nature, and thought it simply criminal to allow it to remain too long in the uterus. At the same time he did not believe in expelling the placenta too rapidly, for the reason that it was liable to thus become stripped of a portion of the membranes, which would be retained in the uterus.

DR. ISAAC E. TAYLOR spoke of the effect of stimulation of the cervix by the touch of the hand in exciting, through reflex action, the fundus to contract and throw off the placenta. He believed in imitating the process of nature, and strongly deprecated too hasty interference in the removal of the after-birth, which, he claimed, should be left largely to nature, and ought ordinarily to occupy from twenty minutes to one hour or more. He was in the habit of taking hold of the cord but of making little or no traction, and he thought

that the delivery of the placenta could be facilitated by modification of the position of the patient according to the part of the uterine walls to which the uterus was attached.

Remarks were also made by DRS. FRUITNIGHT, RANSOM, and SELL.

DR. GARRIGUES, in closing the discussion, said he supposed that it was quite natural that the three methods of which he had spoken in the paper should each have its advocates to a certain extent, but he did not think that any one present would be willing to trust entirely to the do-nothing plan. All agreed that the delivery of the placenta was a strictly physiological process, and hence that all efforts to facilitate this should be in imitation of nature. Traction on the cord, however, did not seem to him a natural process, and in his paper he had endeavored to point out that the different manipulations comprised in Credé's method had the same effect in dislodging and expelling the after-birth that the unaided efforts of nature had in cases where she was capable of conducting the third stage of labor to a successful issue herself. He claimed, therefore, that in the vast majority of cases no traction whatever should be employed. He did not mean to say that inversion of the uterus was always due to this; but, although paralysis of the point of placental attachment, as in Dr. Hadden's case, was one of the recognized causes of inversion, he had no doubt that in a certain proportion of cases the accident was directly attributable to traction. As to facilitating the delivery of the placenta by changing the posture of the patient in accordance with the point of attachment, as suggested by Dr. Taylor, he could not understand how this could be determined without introducing the finger or hand into the uterus, and this he considered unjustifiable under ordinary circumstances. He quite agreed with Dr. Taylor as to the imprudence of too hasty interference in cases of retained placenta, and in his own practice he was accustomed to wait for at least an hour and a half before introducing the hand into the uterus. But, as he had said before, he did not think it right to wait until the placenta began to decompose.

Recent Literature.

Seventieth Annual Report of the Trustees of the Massachusetts General Hospital and McLean Asylum. 1883.

The Seventieth Annual Report of the Massachusetts General Hospital and McLean Asylum shows, like its predecessors, in a general way the excellent work which is being carried on year by year by these noble charities for the good of the community dependent upon them, and gives the details of the operations of the Hospital, the Asylum, and the Convalescent Home during the year 1883. The Treasurer's account makes a better showing than in the three previous years, the excess of expenses over income — which is charged to the general fund — having been only $10,085, instead of $29,860, which it had previously averaged. The receipts at the McLean Asylum exceeded the expenses by $4341.18, while the expenses at the hospital exceeded the receipts by $13,296.47, and at the Convalescent Home by $1130.17. The legacies and bequests received during the past year have been large, amounting to the handsome sum of $227,720, and the annual subscriptions for free beds were $10,600.

Important changes have occurred in the Corporation, in the Board of Trustees, and in the Board of Visiting Physicians. The Corporation lost its Vice-President, Mr. Nathaniel Thayer, who on many occasions had proved a most liberal benefactor of the institution. We have previously recorded the death of Dr. Calvin Ellis, and still another vacancy was created among the visiting physicians by the resignation of Dr. B. S. Shaw after a connection with the hospital in different capacities of twenty-five years, having been at one time its superintendent.

A new and commodious building for the accommodation of the Out-Patient Department has been erected during the year, and is now in full and satisfactory operation. Particular attention is called to the fact that the Convalescent Home at Belmont is designed not only for convalescents from this hospital, but also from other hospitals, private families, boarding houses, etc., and the trustees desire to have it availed of to its fullest capacity.

The Superintendent, Dr. Whittemore, reports that there were 165 patients in the General Hospital at the beginning of the year, and 2020 were admitted during the year, of which 1319 were surgical and only 701 medical patients, a disproportion justifying the reputation which the hospital is gradually acquiring of sacrificing medicine to surgery. Of the whole number of patients treated during the year 473 paid in full, 79 in part, and 1633 were free patients. Of the average number of these free patients, 138, 70 were Americans and 68 foreigners. The average time of the free patients was 4.80 weeks, of the paying patients 2.75 weeks. The greatest number of paying patients at any one time was 49; in private rooms, eight; the greatest number of free patients, 168; the greatest total, 189. The least number of paying patients at any one time was 15; in private rooms, three; the least free, 118; the least total, 143. The proportion of ward beds occupied by free patients was 77 per cent.; by paying patients, 23 per cent. About 13.7 of the paying patients occupied private rooms. The average number of patients was 168: males, 105.5; females 62.5. Sixteen per cent. of the free patients were female domestics; 29 per cent. were laborers; 15 per cent. were mechanics; and nine per cent. were minors. Proportion of deaths to whole number of results, 8.93 per cent. Number of patients received on account of accidents, 432.

The Superintendent of the McLean Asylum, Dr. Cowles, gives the following among other details of the operations of that institution. There were 167 patients in the Asylum at the beginning of the year, and 109 admissions during the year, two men being admitted twice. Of the 107 persons admitted, 67 were regarded as recent cases, and 40 as chronic, or as incurable at the time of admission.

Seventy-five persons, 34 men and 41 women, had never been in any hospital. Of the remaining 32 persons, 18, seven men and 11 women, were admitted for the second time; seven, five men and two women, for the third time; three, two men and one woman, for the fourth time.

Thirty-four cases, representing 33 persons, 10 men and 23 women, were admitted as voluntary patients upon their written applications. Two of the men were not insane: one, a case of the opium habit, was dis-

charged recovered; and the other, of alcoholism, was discharged improved. Of the remaining 31 persons, 25, five men and 20 women, were cases of melancholia: four, one man and three women, were cases of mania; and two men were cases of general paralysis. Of these voluntary patients three, one man and two women, were committed while still resident at the Asylum; and one woman, already referred to, was discharged, and afterwards returned under a commitment. Eleven of the 34 voluntary cases, two men and nine women, were discharged within the year, recovered; four more, two men and two women, as improved or much improved; and two men and one woman as not improved.

There were remaining in the Asylum, under the voluntary relation, 15 persons, three men and 12 women, who entered during the year. Eleven of these voluntary patients had formerly been inmates of the Asylum.

The average duration of illness, from the beginning of attack, of all cases recovered, was 13.39 months; and the average duration of their hospital residence was 8.32 months. The percentage of recoveries on admissions was 33.94. The number of recoveries was larger by eleven than in the previous year.

The presence in the house of voluntary cases in increasing numbers has a good effect, Dr. Cowles thinks, particularly upon new comers, who, influenced by example, become sooner wonted to their residence. Sometimes, on the other hand, the indecision of patients as to whether to remain or go away is not beneficial. Other advantages of the voluntary method are the increased care and attention it induces hospital people to give such patients to make them contented; the necessity under which it lays friends of explaining their reasons for advising hospital residence, and the encouragement to others needing treatment which the example affords.

Much benefit was derived from the occupation by suitable cases of a sea-shore cottage at Lynn during four months of the warm weather. The employment of women as nurses in the men's wards is reported as meeting with unqualified success, and it is hoped shortly to improve the nursing service by introducing the training school system, which we should trust would eventually be felt as a benefit outside the Asylum.

A Manual of Medical Jurisprudence, with Special Reference to Diseases and Injuries of the Nervous System. By Allan McLane Hamilton, M. D. Bermingham and Company. 1883.

Dr. Hamilton is promptly on hand again this year (though the title-page says 1883) with his "little book" of 380 pages. "Its scope is limited," he says, "for I have only considered those conditions of the nervous system which nowadays are so often the bases of litigation." In such cases he hopes it will prove useful as a guide, and also as a book of reference for lawyers and doctors.

This modest little preface rather disarms criticism, for if an author aims at little or nothing and achieves it, who can say that he is not successful. If, on the other hand, he offers to the world a perfect and complete treatise, as he says, which is found on examination to be little more than a barren waste of words, he lays himself open to criticism.

Dr. Hamilton fulfills the promise of his preface and makes even a better book than he would lead us to expect. There is a good deal of value in it and a large number of illustrative cases are given, both old and recent, which have never before been collected in book form, though mostly familiar to the alienist. These cases are interesting, some of them recorded in detail, and will prove of particular value to the lawyer who wishes to crowd the interstices of his elastic brain with numerous facts for the morrow's fray, in which he will give the spectator the impression that for years he has made a special study of insanity.

The first sixty pages of the book are called General Consideration. In a very brief manner the definition of insanity, its classification, its various forms, suicidal attempts, premeditation, post-mortem examinations, etc., are considered.

Chapter II. is on the Legal Relations of Insanity, and covers 110 pages. It begins with Legal Tests, and under the heading of the Border-land of Insanity considers the case of Guiteau in a manner intended to be full, but, according to our opinion, narrow and contracted. Dr. Hamilton disposes of Krafft-Ebing's well recognized forms of insanity of *primäre* and *originäre Verrücktheit* as too sentimental. Guiteau, he says, was a neurotic criminal, and under a better environment might have been a useful member of society! He finally rests satisfied that Guiteau was an eccentric criminal, trying by his actions during the trial to humbug experts and jury.

Dr. Hamilton's whole account of the Guiteau case is an unconvincing personal argument rather than a historical statement of the case, but we can easily pardon him in a matter like this, where arguments to make out the sanity of the subject will always be necessary.

The remainder of Chapter II. contains many suggestions as to the conduct of the insane and numerous cases, all of interest, more particularly to the uninitiated student.

Chapter III., on Hysteroid States and Feigned Diseases, covers fifty pages, and contains much of interest. Some of the subjects treated of may have escaped the notice of many observers.

Chapter IV. is on Epilepsy and rather brief.

Chapter V., on Alcoholism, is also rather short.

Chapter VI. is on Suicide, and the concluding chapters (VII. and VIII.), on Cranial and Spinal Injuries, cover eighty pages, and give a little of everything bearing on these injuries.

Altogether, he who wishes to run may read this book, even if the pace be a rapid one. Our legal brother especially will do well to add it to his library.

A Short Manual for Monthly Nurses. By C. J. Cullingworth, M. D. 16mo, 79 pages. Philadelphia: P. Blakiston, Son & Co., 1884.

This is a sensible and well written book for the instruction of monthly nurses. It does not aim at teaching them how to perform the duties of the medical attendant, but tells them how best to manage a case in his absence, and also gives good advice about sending for the physician in the various emergencies before and after labor. The book will be of no especial value to a training-school nurse; but it is to be commended to the untrained as a safe and reliable guide.

C. M. G.

Medical and Surgical Journal.

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"FURTHER LEGISLATION TO PREVENT THE ADULTERATION OF FOOD AND DRUGS."

As our readers are already aware, the prosecution by the Massachusetts Board of Health, Lunacy, and Charity of certain manufacturers for selling drugs, — such as laudanum and citrate of iron and quinine, — which fell much below the legal standard of purity, has given rise to an attempt originating, as is more than suspected, with the convicted firms to induce the State Legislature to so modify the existing law of 1882, under which the prosecutions were successfully conducted, as to render it practically inoperative.

Advantage was taken by a majority of the legislative Committee on Public Health of a petition "for further legislation to prevent the adulteration of food and drugs" to bring in a report not only full of misstatements but containing recommendations calculated to defeat the object sought by the petitioners. The names of the signers of this report would seem to indicate that they were actuated by a variety of motives, but we were sorry to see among them that of a senator, a member of the Massachusetts Medical Society, who, after the very full discussion of the subject in committee, seems strangely enough to have been but little impressed with the claims which the general public, the medical profession, and the better class of manufacturers and dispensers of drugs make for a stringent law based on a fixed standard.

The recommendations of this majority report may be briefly stated as a substitution of one of the Dispensatories for the Pharmacopœia as a standard, the insertion of the word "materially" after the word "differs" in the paragraph defining adulteration, and an opposition to an increase of the appropriation for enforcing the law. In other words, the majority reported in favor of a loose law and an insufficient appropriation for its enforcement, and this in answer to petitioners "for further legislation to prevent adulteration." With the misstatements contained in this majority report it is not worth while to waste our readers' time.

The minority simply reported in favor of increasing the appropriation for the prevention of adulteration from three to ten thousand dollars, two fifths of this amount to be annually expended for the enforcement of laws against the adulteration of milk, the number of prosecutions and an itemized account of expenditures to be reported annually to the Legislature.

The House of Representatives last week, after a spirited debate in which the majority report was supported by a manufacturer of vinegar essence, spruce beer, and other "notions," by the paid attorney of one of the convicted firms, a member of the House, and by an eclectic medical practitioner, adopted the bill reported by the minority by a vote of one hundred and six yeas to fifty-six nays. It is now expected when the subject comes up in the Senate that honest dealing and the demands of our fellow citizens for further protection against impure drugs and adulterated food will meet with the same sturdy recognition.

The wise result reached by the members of the House of Representatives was, unfortunately, modified by the adoption of an amendment to the Act of 1882, proposed by a representative of Boston, which, in our opinion, will be found both unwise and unnecessary; unwise in so far as it may encourage the sale by grocers and others of such an article as laudanum for general consumption, and open a door — however moderate its dimensions — for fraud; unnecessary in so far as its objects are provided for in the very next sentence of the act itself.

According to section three of the Act of 1882 a drug is declared to be adulterated "if, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity laid down therein." The amendment adopted inserts after the word "therein" the following: "Unless the order calls for an article inferior to such standard, or unless such difference is made known to the purchaser at the time of such sale, or appears obviously by inspection of the article itself."

However little comfort this amendment offers manufacturers of inferior drugs, the objections to it are sufficiently obvious.

We offer our readers outside the State of Massachusetts no apology for treating so much in detail a matter which at first sight may seem to them of purely local interest and perhaps of limited consequence. In reality it is neither. There are few subjects of more importance to modern society than the maintenance of a high commercial and hygienic standard for articles used as food or drugs. The standards and the provisions for their protection adopted in Massachusetts by the Act of 1882 are based upon the recommendations of the National Board of Trade. The emphatic reassertion of its law in regard to these points by one State is a direct encouragement to others. The specious pretexts under cover of which the law is assaulted in Massachusetts, and the facts and arguments by which these are rebutted, will be or will have to be repeated wherever the question is again agitated.

Honest manufacturers, intelligent pharmacists, and dispensers of homœopathic medicines all united here in cordially supporting the law. The threats of its opponents, on the other hand, that the trade and enterprise of Massachusetts would be throttled by the enforcement of the law seemed to find little credence, and the application of vulgar epithets to honest State officials who were conscientiously and judiciously dia-

charging their duties under the law evidently produced a directly opposite effect to that intended.

We respectfully refer other legislative bodies engaged in protecting their constituents against adulterations of food and drugs to the debate in the Massachusetts Legislature. And members of Congress who are now discussing the propriety of appointing a committee to investigate adulteration from a national stand-point would do well to give it their attention.

THE EDINBURGH TERCENTENARY.

The tercentennial anniversary of the University of Edinburgh to be celebrated to-day is an occasion of great interest to all educated men the world over. It is said that among the distinguished men who have been summoned thither *honoris causa* are MM. Charcot and Chevreuil, who will receive the degree of Doctor of Laws. The names of some of our own countrymen who are to be similarly honored have already been given in the Journal. The chief educational institutions of the world are to be represented at the academic assembly to be held on this occasion. A number of our American colleges have been invited to send their delegates. The principal of the University, Sir Alexander Grant, has prepared a history which gives the story of the rise of the different departments of instruction, and of the great men who have from time to time graced the various professorial chairs. Among the natural sciences none has been more ably taught at Edinburgh than medicine. A part of the fame of this as a medical centre is doubtless due to the "extramural" instruction there given, that is, by physicians not officially connected with the University but fitting young men for their diploma examinations. But how great is the debt of the profession to many of the renowned and revered men whose names stand on its professorial roll! Truly *exegeunt monumentum perennius ære.*

Some entertaining stories are told about the elder professors of medicine in this University. Among them was Charles Bell, who it is said once visited the class-room of Roux in Paris. Roux omitted his lecture and dismissed the class, saying, "Sufficient, gentlemen; you have seen Charles Bell." Sir James Y. Simpson's boldness in introducing chloroform gave him a reputation as universal as it was deserved. A Scotchman was presented at the Court of Denmark, when the king said, "You come from Edinburgh? Ah, Sir Simpson was of Edinburgh." Of Simpson himself it is said that he esteemed it a higher privilege to have delivered a woman without pain than to have been made physician to the queen.

Of the contemporaneous teachers at this seat of learning, and of the many men who in other departments than medicine have lent it renown, we cannot speak in detail. That there is no falling off in the quality of the instruction is shown not only by the fact that it is to-day the largest university in the world, but by what is more valuable than any numerical test, its reciprocal action on the mental status of the Scotch people, and by the lofty position which Edinburgh has so long held as an intellectual centre.

May the beneficent influence of this seat of sound learning in medicine and in art continue to grow during another three hundred years!

MEDICAL NOTES.

— The friends of Dr. Whittemore, the Superintendent of the Massachusetts General Hospital, will learn with regret that the indisposition from which he has been suffering for the past few months has necessitated the amputation of the right hand and a portion of the left. We understand that since the operation Dr. Whittemore has been relieved in great measure of the pain which had formerly been so severe, and is in a comfortable and satisfactory condition.

— A French lady is in the courts with two bills whose coincidence in point of time is rather aggravating to her. One is of 2000 francs from a dentist for making a false uvula, to obviate a somewhat nasal tone resulting from the amputation of the natural uvula, which she had procured. The artificial organ caused such interference with appetite, digestion, and speech that medical attendance was necessary, with the result of the second bill of 4500 francs. The dentist's bill was reduced by the court to 600 francs.

— A correspondent of the *New York Medical Journal* relates a case of the morphia habit where the victim took the remarkable dose of a drachm of morphia crystals at night and twenty-five grains in the morning daily for nine days. The reporting physician himself injected twenty-five grains at once, each of three successive evenings.

— Last month a serious case of poisoning, though fortunately not fatal in any of the patients, occurred in Scotland among the boys of the training ship Cumberland. The boys had been sent out for their usual morning exercise, and began gathering roots and herbs which were strewn along the shore. One of them, believing the herb to be harmless, commenced eating it, and his companions followed his example. Shortly afterwards ten of their number complained of sickness, and before they could return to the ship three of them fell into a kind of stupor, and lay helpless in the road. They were carried into a neighbor's house, where some warm milk was procured, but the lads gradually grew worse, as did also several others. Four of their number were conveyed to an infirmary in the neighborhood, where everything was done to produce nausea and to prevent them from falling into a stupor, but despite the efforts of the medical men they remained in an unconscious condition for upwards of five hours. The remaining six were taken on board the ship, where they were duly tended, but in the course of the afternoon it was found necessary to send one of them ashore to the infirmary. These five were in a critical condition for some time, one of the cases being almost hopeless; but all finally recovered. The herb which did the mischief was discovered to be of the hemlock class and of exceedingly virulent action.

— Dr. Saint-Martin (*Revue Médicale*, March 15th), in an inaugural thesis collects a few of the rare instances of rupture of the tunica vaginalis in hydrocele. The individual who has a voluminous hydrocele suddenly feels a keen pain in the scrotum, and on examination finds that the previously circumscribed tumor has disappeared, giving place to a general infiltration of the subcutaneous cellular tissue. In one case referred to, the scrotum, penis, and skin of the abdomen were enormously distended, as if by infiltrated urine. In such extreme cases there is danger of inflammatory complications; but ordinarily the fluid is absorbed and the rupture is an accident of slight importance. Occasionally, however, it gives rise to parietal hæmatocele. Usually the vaginal wound heals and the hydrocele is reproduced, suppuration with adhesions of the sac being rare.

— In one of the recent discussions on the cholera question before the Epidemiological Society of London a somewhat striking illustration of one mode in which cholera is propagated was furnished by Sir William Smart, K. C. B., R. N., who told how the French troops at Varna returned from a march into the Dobrudsha smitten with cholera, and encamped on a plateau, through which ran a stream, from the mouth of which the English admiral's ship and others obtained their water, while higher up the French soldiers were washing their soiled clothes. The flag-ship lost 140 men, but Sir William's, which had brought a supply of pure water from Corfu, remained perfectly healthy except once, when moored near the shore while the wind was blowing strong from the French camp a single case occurred. At his suggestion the captain took her straight out to sea, and no other case appeared on board.

NEW YORK.

— At a special meeting of the County Medical Society held April 7th Dr. David Webster, chairman of the Committee on the Collective Investigation of Disease, read the report of the Committee on Intestinal Obstruction, founded on the replies of members to whom blanks on the subject had been sent. Records, more or less complete, were received of fifty-one cases, in forty-one of which there was total and in four incomplete obstruction of the bowels. In twenty-four cases there was no stercoraceous vomiting, and in three no obstinate constipation, while in one there was no vomiting, though nausea was present. Twenty-one cases, or over forty-one per cent., recovered. Out of nine cases in which the abdomen was opened, and peritoneal bands divided, there were two good recoveries, while in a third case that might have recovered the fatal result seemed purely attributable to imprudence. In sixteen cases the causes of the obstruction were ascertained by operation or post-mortem examination, and were as follows: Peritoneal adhesions in eleven cases; twists in the intestine in two cases; stricture in one case; invagination in one case; and impacted fæces in one case. Dr. Webster then proceeded to read the reports of the fifty-one cases in detail, but before the reading was completed it was decided, on motion of Dr. H. G. Piffard, that the entire report of the committee should be entered upon the minutes and printed, and that discussion of the subject should be postponed until after printed copies had been sent to the members.

— Dr. Piffard then called up the subject of a bill, now pending in the Legislature, to incorporate a college of midwifery in the city of New York (a different one from the proposed bill in regard to which action was taken at the last meeting of the Society), and, on motion of Dr. A. W. Warden, the following preamble and resolutions were adopted: —

Whereas, An effort is being made to incorporate, by act of Legislature, a private institution under the name and title of the College of Midwifery of the City of New York, asking that such proposed institution have the right to confer the degree of graduate in midwifery, and that such diploma be a license to practice midwifery in the State of New York; and

Whereas, The bill incorporating such institution is defective in many important respects, and the objects sought by such bill are considered injurious to the interests of the State of New York and to the medical profession of the State; and

Whereas, No opportunity has been afforded to the medical profession of this State or to the Medical Society of the County of New York to be heard in regard to this measure; therefore

Resolved, That the Medical Society of the County of New York hereby petition that the Assembly of the State of New York defer action until such time as this Society can be heard in opposition to such measure.

Resolved, That a copy of this resolution, signed by the president and secretary of the Medical Society of the County of New York, be transmitted without delay to the Assembly of the State of New York.

On motion of Dr. Piffard it was decided that a committee should be appointed to go to Albany as soon as practicable to oppose the bill now before the Assembly, and a motion of Dr. Garrish having been carried to the effect that the committee should consist of two, and should be appointed by the chair, Dr. Alfred C. Post, acting president, appointed Drs. A. W. Warden and H. J. Garrigues as the committee.

— At a meeting of the Society of Medical Jurisprudence and State Medicine held Thursday evening April 10th, Dr. J. Henry Fruitnight read a paper on The Status of the Midwife, Legal and Professional, in the course of which he deprecated the large number of irresponsible and unfit women now engaged in the practice of midwifery, and contended that either midwives should be prohibited altogether from attending to obstetric cases or that they should be rendered better qualified for their duties and held responsible like physicians. The paper was discussed by Drs. H. J. Garrigues, A. W. Warden, J. C. Peters, A. Jacobi, R. Newman, E. C. Spitzka, and E. Harwood, and at the close of the discussion a resolution was adopted condemning the proposed incorporation by the Legislature of the college of midwifery, in regard to which action was taken at the meeting of the County Medical Society on the 7th of April.

— At a meeting of the Military Service Institution held at Governor's Island April 10th, Gen. Egbert Viele, Commissioner of the New York Park Department, read a paper on Camp and Garrison Sanitation. He began by showing from official statistics the enormous disproportion in a number of great wars between those killed in battle and those who died of disease. Thus, in the war between the United States and Mexico there were killed in battle 120 officers and 1429 soldiers, and died of disease 101 officers and 10,885 soldiers, to which if 9749, discharged for disability, were added, it would make an invalid loss of 20,634 out of the aggregate of 104,454 men engaged in the war; while during the late Civil War the Federal army lost 93,969 men who were killed in battle or died of wounds, and 210,400 who died of disease. Afterwards he spoke of the Walcheren expedition, sent out by the British Government in 1809 to take Antwerp, where more than 40,000 soldiers and a magnificently equipped fleet accomplished nothing on account of the disabling of the troops by disease, and in contrast to this described the building of forts on malarious islands at the mouth of the Savannah River during the late war, where the soldiers by the observance of strict sanitary discipline were enabled to withstand the injurious effects of their surroundings.

A critical examination into the barrack life of the British army made a few years ago, he went on to say, showed that over-crowding, bad ventilation, bad drainage, and bad water were the rule, and not the exception; but great improvements had been made in foreign camp sanitation, and he mentioned particularly the hygienic corps, thoroughly organized and educated in sanitary principles, which was one of the features of the military organization of Switzerland. He then proceeded to show how badly the United States army was quartered. Of all the 187 forts and barracks, he said, no two were alike in plan, profile, or perspective, and if there was any similarity, it was in the discomforts and inconveniences by which they were nearly all surrounded. Some of them had been constructed in such places and in such a manner that it would seem as if human ingenuity had been exercised to the utmost in order to achieve the climax of human stupidity, and the condition of the sea-board forts and harbor stations, he said, was particularly bad. In this connection he quoted the following from Surgeon Bill's report of experiments on atmospheric impurities of soldiers' quarters: "I made no examination of the barracks of Governor's Island, nor of the casemate quarters of the men. As well make an examination of a pig-stye. They disregard every modern notion of hygiene; they are dark, damp, cold, and may or may not contain excess of carbonic anhydride; probably they do not, and hence analytical results would merely mislead." Having described particularly the sanitary defects existing at Fort Adams, Newport, Fort McHenry, Baltimore, and Fort Hamilton, New York Harbor, he went on to say that the evils complained of were found in all the sea-board forts, and, what was worse, the most recent attempts which had been made at improved quarters had resulted in conspicuous failure; the combined result of cheapness, bad contractors, and of too little knowledge of the true principles involved in the construction on the part of those charged with the duty of their erection.

To remedy the errors of years, General Viele said in conclusion, would not be easy, but the principles of sanitation could at least be learned. A porous soil, with good natural drainage, should be selected for a camp. There should be good drinking water, which should never be polluted. The direction of the prevailing wind and sunshine should be considered. Shade trees were an essential element. The drainage should be made perfect. The disposal of refuse matter should be carefully arranged. No subject was less understood in garrisons than ventilation. Every man ought to have eight hundred cubic feet of space to himself, and this should have direct or indirect channels to the outer atmosphere. Disinfectants should be constantly used, and sulphate of iron was especially recommended for this purpose. A bad cook was declared to be the men's worst enemy, and the cooking should be daily inspected. Personal cleanliness should be systematically required, and all the conveniences for securing this provided. The paper was discussed by a number of army surgeons and other gentlemen present, and on motion of General Tower, who said that this important subject was now stirring up the whole medical corps of the army, it was voted that it should be published.

— The State Senate has passed the bill prohibiting the manufacture or sale of oleomargarine or other imitations of butter, and the Adirondack bill, entitled An Act to Create a Forest Commission for the State of New York, and making an Appropriation therefor, which provides for the appointment of three commissioners, with salaries of $2500, to lay out and locate the lands belonging to the State and protect them against trespassers, and for the appropriation of $15,000.

— The health authorities, in investigating the cause of a recent outbreak of typhus fever among the Polish Jews on the East Side, have found that the disease was imported. The first case reported was that of an immigrant child, who arrived here on the steamship Nebraska on the 22d of March and afterwards died of the fever, which she contracted on the vessel. Some of the other cases reported were among immigrants who arrived on the steamer Moravia on March 26th.

— In the death of Mrs. Oswald Ottendorfer, wife of the proprietor of the *New Yorker Staats Zeitung*, New York has lost one of its most liberal benefactresses. In addition to many other charities during her life she built the Isabella Home for Aged Women, at Astoria, in memory of a deceased daughter, at a cost of over $100,000, erected and furnished a wing of the German Hospital (the woman's pavilion) at a like cost, and expended over $150,000 for the German Dispensary Free Reading Rooms, now in course of construction. In her will, besides many other charitable bequests, she left $10,000 to the German Hospital and Dispensary of New York, and $5,000 to the German Hospital at Newark, New Jersey.

— The death of the oldest son of Mr. Joseph H. Choate, a member of the freshman class of Harvard College, who died at his father's residence in New York on the 5th of April, was due to apoplexy, although he was but nineteen years of age.

Miscellany.

MALARIA AND DIPHTHERIA IN CONNECTICUT.

THE secretary of the Board of Health reports for the month of February in Connecticut that the month does not present as good a record as it should for a short one. The total mortalities are too high, and the ratios are higher than those for the same month in previous years. The most noticeable event is the return of acute tertian ague. For some time past reports have been made of this recurrence, now here, now there, until it has extended over nearly all the region that has been invaded by malaria, where dumb ague and the like and the continued type of disease had been the rule. The last new start is reported from Middlesex County, from Durham, and adjacent towns, thus completing the whole area except here and there localities that have not yet showed the movement. It has been irregular both as to time and space, and at first suggests a renewed onslaught of malaria as it first appeared, but there is no increase in the periodic type, and, as a rule, after the appearance of quite a number of cases the frequency diminishes, and scattering cases continue to be encountered. As clearly defined cases of tertian ague had rarely been seen over a large area, where the decline of the periodic type and the decrease in malarial cases indicated an entire disappearance of the disease, the reappearance excites attention, and the developments will be closely watched to learn what the prospects are that the malarial type has become a permanent one. As typho-malaria fever still lingers in England we may expect the same result here, but whether acute ague is to be a regular affliction is another question.

The epidemic of diphtheria continued unabated during February. In Hartford the death-rate is even higher than in January, and the number from zymotic diseases and the infantile deaths are slightly increased over those of January. The total mortality since January, 1883, from croup and diphtheria is 295, a condition unprecedented in the sanitary history of the State.

DURATION OF THE MENSTRUAL HÆMORRHAGE IN RELATION TO THE DEVELOPMENT OF THE FŒTUS AT TERM, AND TO MULTIPLE PREGNANCY.

THE *London Medical Record* summarizes a paper by Cuzzi (*Rivista Clinica* and *Annali Univ. di Med.*, July, 1883), in which the author seeks to establish his conclusions on the basis of much statistical material collected in the clinics of Modena, Milan, and Turin. He was led to this research by the idea that by the amenorrhœa of pregnancy a so much greater quantity of maternal nourishment was retained for the benefit of the fœtus, as the sanguineous loss was greater in menstruation. Not being able to determine exactly the quantity lost at each period he took its duration as a guide which, considering the number of his observations, may be regarded as more or less equivalent. As to a longer duration of the menstrual hæmorrhage a corresponding ovarian activity can be supposed; so, also, the hypothesis may be justified of a more easy rupture of more ovisacs, and a greater probability of multiple pregnancy. From the analysis of very numerous observations Professor Cuzzi thinks himself justified in formulating the following conclusions: (1.) The weight and length of the fœtus at term are in direct relation with the number of days menstruation occupied. The longer the usual period of menstruation the heavier and larger the fœtus. (2.) There is a direct relation between multiple pregnancy and the duration of the menstrual period. That is, multiple pregnancy is most frequent in women in whom the period is long and the loss free.

INTERNATIONAL HEALTH EXHIBITION.

A SOMEWHAT novel feature in connection with the exhibition this year will be the establishment of a Library and Reading Room, a home for which the Executive Council have assigned in a large double room in the Albert Hall, overlooking the Conservatory. Steps have been taken to secure a representative collection of works on vital statistics, of reports and regulations relating to public health, of regulations with reference to injurious trades, and of works thereon, and of reports, statistics, and other works on the science of education. Foreign powers have been invited to lend their coöperation in this effort to create an international library of works of reference bearing on the two divisions of the Exhibition, and several responses have already been received. India and the Colonies have also been asked to contribute towards the same end. Publishers and authors have likewise been invited to forward copies of their works. In addition to the Library of Reference there will be a Reading Room, to which the current numbers of periodical publications of a sanitary or educational character will be admitted. All books and periodicals sent to the library and reading room will, under certain regulations, be arranged for the use of visitors, and not merely for exhibition. The books will be submitted to the jurors, and a full catalogue will be issued. All parcels for the Library and Reading Room should be addressed, carriage paid, to the Secretary of the Library Sub Committee, Royal Albert Hall, London, S. W.

April 2, 1884.

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS UNITED STATES NAVY FOR THE TWO WEEKS ENDING APRIL 12, 1884.

WALES, P. S., medical director, granted one year's leave of absence from March 28th, with permission to leave United States.

BATES, N. L., medical inspector, ordered to Washington to attend sick officers.

BRADLEY, M., medical inspector, ordered to continue duty at League Island Navy Yard.

WHITAKER, H. W., assistant surgeon, ordered to Naval Rendezvous at Philadelphia, Pa.

GUNNELL, F. M., surgeon-general, appointed Chief of Bureau of Medicine and Surgery and Surgeon-General of the Navy, with the relative rank of commodore, from March 27th.

RUSH, C. W., passed assistant surgeon, ordered to Naval Academy.

MCMURTRIE, D., surgeon, detached from Naval Rendezvous, Philadelphia, and to await orders for duty at Navy Yard, Washington, D. C.

NELSON, H. C., medical inspector, ordered before Retiring Board.

GORGAS, A. C., medical director, to be medical director from 4th March on the active list.

BATTLE, S. W., passed assistant surgeon, ordered before Retiring Board.

WELLS, H. M., surgeon, detached from Naval Hospital, New York, to report at Bureau for special duty.

HIBBETT, C. T., passed assistant surgeon, placed on waiting orders.

STEWART, H., surgeon, placed on retired list from April 10th.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 5, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	611	239	14.88	17.28	—	5.12	2.56
Philadelphia	927,995	402	154	10.25	17.75	3.50	3.50	1.75
Brooklyn	644,526	261	91	12.92	12.16	.38	6.68	1.90
Chicago	632,100	245	133	17.35	13.05	1.35	4.95	2.25
Boston	423,800	176	54	15.39	17.10	1.14	5.13	2.28
Baltimore	408,520	142	53	19.17	15.62	2.84	2.84	1.42
St. Louis	400,000	138	42	12.96	17.28	.72	5.04	2.88
Cincinnati	272,400	139 [1]	23	12.96	19.44	.72	2.16	.72
New Orleans	234,000	130	39	19.22	16.15	—	1.54	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	81	24	11.07	20.91	—	3.69	4.92
Pittsburg	180,000	80	41	8.75	8.75	2.50	1.25	3.75
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	25	4	8.00	12.00	4.00	—	4.00
Nashville	54,400	14	3	21.52	—	—	—	—
Charleston	52,286	37	12	7.40	24.30	2.70	—	—
Lowell	71,447	23	5	8.70	13.05	4.35	—	4.35
Worcester	69,442	15	7	6.66	26.66	—	6.66	—
Fall River	62,674	13	7	7.69	—	—	7.69	—
Cambridge	60,995	16	5	12.50	12.50	6.25	6.25	—
Lawrence	45,516	15	6	—	—	—	—	—
Lynn	44,895	13	2	—	14.38	—	—	—
Springfield	38,090	13	2	—	14.38	—	—	—
Somerville	31,350	5	0	40.00	40.00	—	40.00	—
Holyoke	30,515	8	2	12.50	37.50	12.50	—	—
New Bedford	30,144	12	2	8.33	16.66	—	—	—
Salem	29,503	7	3	14.28	28.56	—	14.28	—
Chelsea	24,347	11	4	9.09	9.09	9.09	—	—
Taunton	22,693	7	2	14.28	14.28	—	14.28	—
Gloucester	21,400	2	0	—	—	—	—	—
Haverhill	20,905	8	1	—	12.50	—	—	—
Newton	19,421	8	1	—	—	—	—	—
Brockton	18,323	4	1	—	25.00	—	—	—
Malden	15,273	4	1	75.00	—	—	—	—
Newburyport	13,947	8	2	12.50	37.50	—	12.50	—
Fitchburg	13,433	3	1	33.33	—	—	—	—
Seventy-six Massachusetts towns	344,254	62	15	17.71	46.35	—	3.22	8.05

[1] Of the above 139 deaths 41 were killed during the riot.

Deaths reported 2640 (no reports from Buffalo, Milwaukee, and Providence): under five years of age, 981: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 377, consumption 465, lung diseases 397, diphtheria and croup 111, scarlet fever 60, diarrhœal diseases 43, typhoid fever 34, measles 35, whooping-cough 21, erysipelas 17, puerperal fever 14, small-pox 16, malarial fevers 13, cerebro-spinal meningitis 10, typhus fever three. From *diarrhœal diseases*, Chicago 11, New York 10, Cincinnati six, Philadelphia and Malden three each, Boston, St. Louis, and District of Columbia two each, Brooklyn, Baltimore, New Orleans, Charleston, New Bedford, and Milford one each. From *measles*, New York 12, Baltimore 10, New Orleans seven, Chicago four, Brooklyn two. From *whooping-cough*, New York nine, Brooklyn, Boston, Baltimore, and Cincinnati two each, Chicago, New Orleans, Marblehead, and Lee one each. From *erysipelas* New York five, Boston three, Brooklyn and Chicago two each, Baltimore, St. Louis, Cincinnati, and Brooklyn one each. From *small-pox*, New Orleans 12, Cincinnati two, Pittsburg and Nashville one each. From *puerperal fever*, Boston four, Chicago three, Brooklyn and Nashville two each, Baltimore, St. Louis, Cincinnati, New Orleans, and Fitchburg one each. From *malarial fevers*, Brooklyn three, Chicago and Baltimore two each, New York, Philadelphia, St. Louis, Cincinnati, New Orleans, and Charleston one each. From *cerebro-spinal meningitis*, New York five, Philadelphia two, Chicago, Boston, and St. Louis one each. From *typhus fever*, New York three.

Six cases of small-pox were reported in St. Louis, Cincinnati one; scarlet fever 44, diphtheria 17, typhoid fever four, and measles one, in Boston.

In 96 cities and towns of Massachusetts, with an estimated population of 1,352,159 (estimated population of the State 1,955,104), the total death-rate for the week was 16.77 against 18.21 and 22.61 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending March 22d, the death-rate was 22.1. Deaths reported 3709: acute diseases of the respiratory organs (London) 373, whooping-cough 143, measles 141, scarlet fever 86, diarrhœa 42, fever 35, diphtheria 28, small-pox (Birmingham four, London, Liverpool, and Sunderland three each) 13. The death-rates ranged from 15.2 in Plymouth to 31.5 in Preston; Birkenhead 18.9; Leicester 19.6; Sunderland 19.9; London 20.6; Sheffield 21; Huddersfield 21.8; Birmingham 21.9; Liverpool 27; Manchester 27.9; Leeds 28.2. In Edinburgh 18.6; Glasgow 25.8; Dublin 27.5.

For the week ending March 22d, in the Swiss towns, there were 36 deaths from consumption, lung diseases 27, typhoid fever 35, diarrhœal diseases 24, whooping-cough seven, diphtheria and croup six, scarlet fever five, measles one. The death-rates were, at Geneva 40.8; Zurich 19.7; Basle 25.6; Berne 28.9.

The meteorological record for the week ending April 5th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date. March–April, 1884.	Barometer. Daily Mean.	Thermometer. Daily Mean.	Thermometer. Maximum.	Thermometer. Minimum.	Relative Humidity. 7.23 A. M.	Relative Humidity. 3.23 P. M.	Relative Humidity. 11.23 P. M.	Relative Humidity. Daily Mean.	Direction of Wind. 7.23 A. M.	Direction of Wind. 3.23 P. M.	Direction of Wind. 11.23 P. M.	Velocity of Wind. 7.23 A. M.	Velocity of Wind. 3.23 P. M.	Velocity of Wind. 11.23 P. M.	State of Weather.[1] 7.23 A. M.	State of Weather.[1] 3.23 P. M.	State of Weather.[1] 11.23 P. M.	Rainfall. Duration. Hrs. & Min.	Rainfall. Amount in inches.
Sun., 30	29.715	17	43	10	89	77	100	89	NW	NW	N	34	34	22	S	O	F	—	—
Mon., 31	29.841	28	37	17	93	57	80	77	NW	NW	NW	22	25	16	F	C	C	—	—
Tues., 1	29.748	37	46	27	83	45	61	63	NW	NW	NW	12	14	8	C	C	C	—	—
Wed., 2	29.319	32	38	30	74	100	100	91	NE	E	N	4	18	18	O	S	S	—	—
Thurs., 3	29.051	36	40	29	100	89	81	90	NW	NW	W	16	22	19	S	R	O	—	—
Fri., 4	29.210	37	41	34	90	78	81	83	NW	NW	NW	23	19	17	S	R	O	—	—
Sat., 5	29.388	33	42	31	72	64	81	72	NW	NW	NW	15	21	14	O	O	O	—	—
Mean, the Week.	29.463	31	41	25				81										56.00	1.86

[1] O., cloudy; C., clear; F., fair; G., fog; H., sleet; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MARCH 29, 1884, TO APRIL 11, 1884.

WOODHULL, ALFRED A., major and surgeon. Granted leave of absence for twenty-two days, to take effect about April 6, 1884. Paragraph 13, S. O. 72, A. G. O., March 28, 1884.

WHITE, ROBERT H., captain and assistant surgeon. To be relieved from duty at U. S. Military Academy, West Point, N. Y., August 28, 1884. Paragraph 7, S. O. 74, A. G. O., March 31, 1884.

MEARNS, EDGAR A., first lieutenant and assistant surgeon. Assigned to duty at Fort Verde, A. T. Paragraph 1, S. O. 22, headquarters Department of Arizona, March 19, 1874.

SUTHERLAND, CHARLES, colonel and surgeon. To be relieved from duty in Division of the Pacific and to report to the commanding general, Division of the Atlantic, for duty as medical director of that Division and of the Department of the East. Paragraph 4, S. O. 78, A. G. O., April 4, 1884.

BAILY, ELISHA J., colonel and surgeon, ordered to report to the commanding general, Division of the Pacific, for duty as medical director of that division and of the Department of California. Paragraph 4, S. O. 78, A. G. O., April 4, 1884.

STERNBERG, GEORGE M., major and surgeon. Ordered to be relieved from duty in Department of California, and to report to commanding general, Department of the East, for assignment to duty.

MOSELEY, EDWARD B., captain and assistant surgeon. Ordered to be relieved from duty in Department of the East and to report to the commanding general, Department of the Columbia, for assignment to duty. Paragraph 4, S. O. 78, A. G. O., April 4, 1884.

SMITH, JOSEPH R., major and surgeon. Directed to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held in Washington, D. C., on the 6th of May, 1884, and on the adjournment of the Association to return to his proper station (San Antonio, Texas). Paragraph 7, S. O. 81, A. G. O., April 8, 1884.

WILCOX, TIMOTHY E., captain and assistant surgeon. Ordered to be relieved from duty in Department of the Columbia and to report to the commanding general, Department of the East, for assignment to duty. Paragraph 4, S. O. 78, A. G. O., April 4, 1884.

OBITUARY.

DR. PLINY A. JEWETT, a prominent practitioner of New Haven, and well known as having been an expert witness in a number of important medico-legal cases, died April 10th in Providence. He went to Providence a week before to testify, as an expert, in a murder case, and was taken with pneumonia. He was a life director in the Connecticut General Hospital, and during the war was in charge of the military hospital in New Haven. He graduated from Trinity College in 1837, and was appointed Professor of Obstetrics in Yale College in 1856. He leaves two sons and one daughter.

SUFFOLK DISTRICT MEDICAL SOCIETY. — The annual meeting of the Suffolk District Medical Society will be held on Saturday, April 26th, at 7.45 P. M. Dr. A. Day will present a paper entitled Popular Medical Delusions. Other papers will also be presented. Business: Election of officers. The following is the ticket reported by the nominating committee: *For President*, James C. White. *For Vice-President*, George B. Shattuck. *For Secretary*, C. M. Green. *For Treasurer*, E. M. Buckingham. *For Librarian*, B. J. Jeffries. *For Commissioner of Trials*, Charles W. Swan. *For District Nominating Committee*, George C. Shattuck. *For Committee of Supervision*, Benjamin S. Shaw, Samuel A. Green. *For Committee on Social Meetings*, Calvin Stevens, H. I. Bowditch, George W. Gay. *For Censors*, A. N. Blodgett, E. G. Cutler, T. M. Rotch, F. C. Shattuck, F. H. Williams. *For Councilors*, S. L. Abbot, James Ayer, H. H. A. Beach, H. J. Bigelow, C. J. Blake, J. G. Blake, H. I. Bowditch, S. Cabot, D. W. Cheever, Hall Curtis, H. Derby, O. W. Doe, F. W. Draper, Thomas Dwight, W. H. Thorndike, R. H. Fitz, C. F. Folsom, J. O. Green, S. A. Green, F. B. Greenough, W. H. H. Hastings, J. R. Draper, R. M. Hodges, C. D. Homans, John Homans, W. Ingalls, B. J. Jeffries, F. I. Knight, S. W. Langmaid, G. H. Lyman, F. Minot, C. B. Porter, John P. Reynolds, W. L. Richardson, G. C. Shattuck, B. S. Shaw, A. D. Sinclair, D. H. Storer, A. M. Sumner, C. W. Swan, G. G. Tarbell, O. F. Wadsworth, J. C. Warren, Thomas Waterman, James C. White, E. N. Whittier, W. G. Wheeler, H. W. Williams. Supper at the usual hour.

H. C. HAVEN, *Secretary*.

THE AMERICAN MEDICAL ASSOCIATION. SECTION OF PRACTICE OF MEDICINE. — The chairman, Dr. John V. Shoemaker, of Philadelphia, Penn., submits the official programme for the meetings of the Section of Practice of Medicine, to be held in Washington, D. C., Tuesday, Wednesday, and Thursday afternoons, May 6, 7, and 8, 1884. The following special subjects have been promised, and those who are announced to enter into the discussions have accepted and will be present: (1.) Discussion on A Contribution to the Clinical Study of Epilepsy, will be opened by Prof. William Pepper, of Pennsylvania. (2.) A discussion on the Clinical Study of the Heart Sounds, will be opened by Prof. Austin Flint, Sr., of New York. (3.) A discussion on Tuberculosis, will be opened by Dr. Henry F. Formad, of Pennsylvania. No less than twenty-one papers on various medical subjects are also promised, and have been accepted.

BOOKS AND PAMPHLETS RECEIVED. — The Pathology, Diagnosis, and Treatment of Diseases of the Rectum and Anus. By Charles B. Kelsey, M. D., Surgeon to St. Paul's Infirmary for Diseases of the Rectum, etc. With two Chromo-Lithographs and nearly 100 Illustrations. New York: William Wood & Co. 1884.

Moral (Affective) Insanity, Psycho-Sensory Insanity. By C. H. Hughes, M. D., St. Louis. (Reprint.)

Shakspeare as a Physician. Comprising every Word which in any Way relates to Medicine, Surgery, or Obstetrics found in the Complete Works of that Writer, with Criticisms and Comparison of the Same with the Medical Thoughts of To-Day. By J. Portman Chesney, M. D. St. Louis: J. H. Chambers & Co. 1884.

Lectures.

CLINICAL LECTURE ON A CASE OF MYXŒDEMA.

BY ROBERT T. EDES, M. D.,
Visiting Physician Boston City Hospital.

A PATIENT was exhibited whose history, as elicited by a member of the class, with some assistance from the hospital books, was as follows: —

She is forty-five years old, and is still menstruating regularly. She has two children, the youngest being thirteen years old, and is a housekeeper of regular habits. She has had "neuralgia" for nine years. For the last two years she has had some indistinctness of vision, and also some swelling of the eyelids, two facts which she seems to consider (incorrectly) to be related to each other. She has also had some swelling of her hands and wrists, but says there has been none elsewhere. She complains of some prickling and numbness in her hands and feet, which are apt to be cold. According to her own statement she was formerly of a more lively disposition, and talked more rapidly than at present, though whether this change is greater than can be accounted for by the sobering influence of years is not apparent, and no friends have given us any history of her former characteristics.

She has suffered from frequent headaches. There is no cough, but a certain amount of dyspnœa on exertion. Her appetite is only moderate, her digestion not very good, and a moderate degree of constipation is present.

Upon examination she is seen to be a woman rather inclined to stoutness, with a rosy complexion, and a peculiar physiognomy. The whole face appears somewhat swollen, including the lips, which gives a heavy and mask-like expression to the lower part of the countenance. The cheeks are quite red, but the eyelids and forehead are rather brown and dusky. The hair is quite abundant, and very dark brown, slightly streaked with gray. Her hands, small, and naturally well shaped, are a little swollen, so that her wedding ring has not been removable for a long time, though she says she can turn it round. The ends of the fingers are *not* clubbed. The skin of the hands is dry and rough. The legs, which she says are not swollen, are very slightly so, and can be slightly pitted by firm pressure. The subcutaneous œdema of the eyelids and hands is not easily to be driven out by pressure as is the case with an ordinary serous anasarca. The thyroid gland, so far as it can be distinguished from the adipose tissue of the neck, is neither absent nor enlarged. Her speech is slow and deliberate, but perfectly distinct and well articulated. Her mind seems perfectly clear, and there is no apparent delay of comprehension or answer. The hearing is considerably diminished, as she hears the watch only at ten inches. Dr. Green finds no advanced aural change, but a little opacity of the lower part of the drum membrane.

It was not unnaturally thought, at first sight, that these symptoms pointed to a chronic nephritis, but a further study of the case renders this diagnosis improbable, that is, so far as either of the ordinary forms is concerned, for in the first place the urine is not that of *parenchymatous* nephritis, as it is found of about normal specific gravity, and not deficient in quantity (from about thirty ounces or a litre to double this quantity), while the albumen is either none at all (hospital) or a very slight trace (Dr. Wood), and there are a *few* transparent and granular casts of medium diameter. If this were the urine of *interstitial* nephritis, which, so far as albumen and casts are concerned, it might well be, its quantity should be much larger. In this case, too, if it had gone on long enough to give rise to dropsy, we should have a right to expect cardio-vascular changes consisting in hypertrophy of the heart and the pulse of high tension, neither of which is present, as may be shown by a physical examination of the thorax and the sphygmographic tracing which has been taken. The dimness of vision, already spoken of, does *not* depend, as we are informed by Dr. Wadsworth, upon albuminuric retinitis, of which she shows no trace, so that if this is a case of chronic nephritis it is a very unusual one. But it is no more than fair to say that it has been claimed by one physician who has given special attention to renal diseases (Dr. Mahomed) that cases of the kind which we shall consider this to be are neither more nor less than exceedingly chronic examples of Bright's disease. Most authorities, however, and it seems to me correctly, consider them as forming a very distinct group which has little to do, at least in the early stages, with nephritis, although changes in the kidneys, in common with other organs, have been found after death. They have received the name of myxœdema (Μυξα, mucus) from the peculiar character of the œdema, which does not consist, like ordinary œdema, in the accumulation of serum in the subcutaneous and submucous cellular tissue, but, in places at least, of a firmer substance, which is less easily displaced by pressure, and contains mucin and an abnormal number of swollen nuclei.

It will be admitted, I think, that the case before us, if her most prominent symptoms be compared with the descriptions given by many observers, is fairly to be classified under this head, but other conditions to which much importance has been attached, and which, indeed, lend a considerable part of the interest which is now felt in this curious affection, are but slightly developed. It is evident that our patient is not an advanced case. The general state of her nutrition is not so far "below par" as in most of the cases recorded. Thus the temperature is not below the normal standard, as it has been usually found. As to the amount of urea excreted, one quantitative analysis has given about twenty-five grammes per diem. She has not the œdema of the palate, glottis, and pharynx which cause the nasal voice and sometimes difficult respiration. Her hair has not suffered.

It is, however, in regard to the nervous symptoms, so pronounced in many cases, that we notice the most marked difference from the type. To represent these she has only the numb feelings in the hands and feet, and the slight sluggishness of manner. Of the incoordination, which has caused, at times, confusion between this disease and locomotor ataxy, or the condition spoken of as cretinism, she has hardly a trace. Whether these are to come or not, time alone can show, but in consideration of the short time during which this distinct type of disease has been recognized, and the somewhat limited statistics in our possession, we may consider it at least possible that there may be cases in which these are fortunately absent or long delayed.

In view of the infrequency with which these cases have been met with it was thought that an examination of the condition of the blood might prove interesting, but it showed no deviation from the normal, the

amount of hæmoglobin as shown by Gower's color estimate being equal to that of a healthy person, and the count of the blood corpuscles being 4,625,000, the corpuscles not being deformed, and there being no excess of leucocytes or microcytes. It is seen that at present there is no anæmia.

Two other cases were briefly described by the instructor for purposes of comparison. The first of these, presenting more of the classical features and evidently more advanced, came under observation thirteen or fourteen years ago. I used to meet in the street a rather large woman, walking slowly and much wrapped up, with a pale, swollen face, whom I supposed to be suffering from chronic Bright's disease or the most extreme anæmia, and mentally made a most unfavorable prognosis, expecting her to die within a year or two at the furthest. This was before I knew anything about her professionally or about myxœdema either.

Some time, I think some years, afterward I found a condition similar to that of our patient here but much more extreme, especially as regards loss of strength and the degree of anæmia. Her illness dates back to the cessation of menstruation.

There was great swelling of the whole face, the lower eyelids hung down in great bags, and the hands were of the most ponderous proportions, but neither white and shiny like those of renal dropsy nor cold and purple like those of impeded circulation.

Her voice was a little hoarse, and together with her general manner exceedingly slow and deliberate, though how great the change may have been from her former condition I cannot say, as I had not known her in health. Her appearance was noticeable from the amount of wraps she habitually used even in warm weather. She has from time to time had shooting pains in the limbs and stiffness in using them. She has suffered a large part of the time from chronic diarrhœa with much pain, for which various drugs have given only temporary relief, the most trustworthy being opium, which unfortunately she does not bear very well.

Her urine was found at various times of the specific gravity 1.016 to 1.034, and not notably changed in quantity. I was greatly surprised never to find in the several examinations I made any albumen, and on the only occasion where I find casts distinctly spoken of in my notes (though I have no doubt I examined several times) their presence is denied.

Her blood count was 3,320,000.

A noticeable feature in her case was the entire loss of her hair, which has, however, since been replaced by a new growth of soft brown hair several inches long all over her head. She remains in essentially the same condition, though having lost in strength, and is a striking instance of the chronicity of the disease.

Another case, which in some respects was the most marked of the three, and presented special points of interest, was seen about two years ago with Dr. West, of Roxbury, who will soon report it in detail, together with the autopsy.

In this case the physiognomy was similar to that of our patient, but the voice, probably owing to œdema of the palate, pharynx, and glottis, was husky and nasal. She died suddenly after going to bed in no worse condition than usual, attention being called to her by the cessation of the snoring. This result is to be looked upon as an accident to which such patients are liable rather than the natural or usual termination of the disease.

The morbid appearances in this case were largely negative, but showed in some certain localities the presence of a peculiar form of œdema. I understand they are to be reported in detail in connection with the clinical history.

The pathological appearances found in this affection have already been spoken of in a general way, and many of the symptoms, especially the nervous ones, have been accounted for, with some probability, by supposing that the general deposit of mucous tissue so "pads" the ends of the sensitive nerves and perhaps also the nervous centres as to destroy the delicacy of their function. This is, however, as yet to a considerable extent theoretical, and we have to wait for further observations in this direction.

There is no reason to suppose that the prognosis of the case before us differs in any essential respect from that which is usual. It is stated that the condition generally grows worse, that marked anæmia and renal disease accompanied by the ordinary form of dropsy are likely to supervene; the nervous symptoms become aggravated, the patient gradually getting into a condition described as closely resembling cretinism.

Quite recently it has been found that patients whose thyroid glands have been completely removed present after a time symptoms almost identical with those of advanced myxœdema.

There have been exceptions enough to this unfavorable prognosis to give a certain amount of encouragement that a cure may not always be impossible, or that at any rate symptoms may be mitigated and life prolonged even beyond the usual very chronic course. Curiously enough it has happened that in some cases when *ordinary* dropsy comes on as a consequence of renal disease supervening on the condition we are now discussing the *myx*-œdema has disappeared.

One case is reported where abdominal dropsy occurring in a man affected with myxœdema grew sufficiently severe to demand tapping, which having been done both ascites and myxœdema disappeared. In another case pregnancy and childbirth, which was accomplished with some difficulty, put an end to the morbid condition. Other cases of recovery have been spoken of as not due to any specific treatment. Where, however, the progress is steadily toward the worse it is often extremely slow. In the second case spoken of in this lecture the disease has been going on probably for at least fourteen or fifteen years, with no immediate prospect of a fatal termination, though there is a very decided loss of strength.

No treatment so far proposed has been attended with invariable or even very marked success. Favorable results have been claimed for strychnine, and quite recently for jaborandi in not too large doses but continued for a long time. Hot-air baths may also be of service, the action on the skin of the last two remedies being obviously very similar.

In our case nothing very active has yet been done. It is well, in hospital practice at least, when the case is not urgent to wait a little to see what change and rest will do; in this way many mistakes as to the effects of remedies may be avoided. She has had iron and quinine and the faradic current to the hands, which has relieved some of the uncomfortable sensations. She expresses herself as much better, and there is certainly less swelling than when she entered. By and by perhaps jaborandi may be used.[1]

[1] She has since left the hospital.

Original Articles.

THREE CASES ILLUSTRATING SOME POINTS IN THE PATHOLOGY OF CERTAIN INJURIES OF THE SHOULDER-JOINT.[1]

BY C. B. NANCREDE, M. D.,

Surgeon to the Episcopal Hospital, and to St. Christopher's Hospital for Children.

A few preliminary anatomical points must be passed in review for the ready comprehension of my later remarks. The shoulder-joint differs in many important points from any other articulation of the body. A moment's reflection upon the almost unlimited range of movement which it enjoys will at once suggest that the ligaments of this articulation cannot be the means by which the joint surfaces are held in apposition; otherwise anything like freedom of movement would be impossible in a ball and socket joint where the socket is so shallow as in this articulation. What then does hold, firmly apposed, the articular surfaces? It must be something always tightly stretched, yet always capable of lengthening or rather always practically loose. Nothing but muscle could fulfill any such purpose. In truth, the muscles surrounding the joint are the most important ligaments the articulation possesses. When these are paralyzed, or in the cadaver, the head of the humerus readily falls away from the glenoid fossa. Bearing this fact in mind, you will clearly apprehend that the joint surfaces are kept pressed together solely by muscular tension. Again, the glenoid fossa, unlike the socket of any other important joint, *has no epiphysis*, which explains to a degree the fact that even in the young the head of the humerus may be so affected as to demand excision, while the glenoid process is either entirely or nearly healthy. Closely related with the scapulo-humeral joint, we find a number of bursæ, some of which commonly communicate with the joint, while others do not. To the former alone I shall devote my remarks. There is a large one between the acromial process and the coraco-acromial ligament upon the one hand, and the shoulder capsule upon the other. Two bursæ — the exact sites are unimportant for our present purposes — are situated between the subscapularis muscle and the capsule. An occasional one is placed between the infraspinatus muscle and the capsule, into which it often opens, as do the others just mentioned. Let an inflammation be set up in these sacs, and it certainly spreads to the joint itself, should communications exist, or nearly as surely by mere contiguity of tissue, if no opening between joint and bursæ is present. The articulation is securely covered in by the voluminous deltoid, so that any direct injury to the fibrous or synovial tissues of the joint is almost impossible from direct force, as a blow, although a twist *may* injure it, notwithstanding the latter is more apt to tear the bursal walls. The upper epiphyses of the humerus — of which there are three — coalesce at five years, but they leave a layer of epiphyseal cartilage between head and tuberosities and shaft, which in places either coincides with the capsular attachment or is actually within it. From these anatomical facts it must be clear that direct force, as a blow, can rarely injure the joint itself, but must either set up trouble in the surrounding bursæ or in the epiphyseal cartilage, or in both. Once again the interior of the joint, the muscles moving the joint, and the skin over their attachment are all supplied by the same nerve or nerves; so that let a joint injury start where it may, the articulating surfaces of the shoulder-joint are subjected to such an injurious degree of pressure from direct or reflex muscular contraction as is possible for no other articulation. The bearing of these anatomical facts upon prognosis and treatment need hardly be pointed out.

The first specimen I proposed showing was presented to the Society some years back, and my reason for again showing it is the sharply contrasted result presented by the second specimen which I shall exhibit.

On November 27, 1878, the Society had an opportunity of examining the first patient and the admirable results of the case. To those who were not present, or who have forgotten the details, I will briefly recapitulate the history of the case, with the treatment pursued: —

COMPOUND FRACTURE AT THE ANATOMICAL NECK OF THE HUMERUS.

The patient, J. M., aged fourteen years, fell, upon the afternoon of September 23, 1878, from a tree, about twenty-five feet, landing on the ground, but striking in his fall against the branches of the tree, and sustained the following injuries: The shaft of the humerus was separated from the head and greater and lesser tuberosities. The line of fracture closely followed the epiphyseal cartilage, although in several places the diaphysis was fractured. The shaft, slightly split, was driven through the integuments over the lower part of the deltoid muscle on its anterior aspect, tearing in its course the following parts: the insertion of the deltoid was completely stripped off with the subjacent periosteum; the coraco-brachial, teres major, and latissimus dorsi were in like manner torn off, the latter carrying with them the posterior lip of the bicipital groove. The tendon of the pectoralis major was torn off about half an inch from its insertion, and one if not both heads of the biceps was ruptured. In consequence the head and neck of the bone, deprived of periosteum, merely hung suspended by the capsular ligament and the rotator muscles. The shell of bone connected with the head and tuberosities was fissured at various portions of its circumference, as if by the impacting action of the wedge-shaped extremity of the shaft. I enlarged the wound and removed the fragments you see, namely, four and one fourth inches of the humerus, including its head. Seven weeks after the operation he could remove his coat, vest, and shirt without assistance. Ten weeks after the injury considerable reproduction of bone, even up to the margin of the glenoid cavity, was observed, with new attachments for the pectoral and latissimus dorsi muscles, as determined by Dr. C. T. Hunter. The actual shortening consequently amounted to only one and a half inches. He had perfect use of the fore-arm, could put his hand to his mouth, behind his back, and to his ear. Of course he had lost all over-hand movements.

The course of treatment pursued, and my reasons for deciding upon it, seem worthy of detail, since such injuries are but seldom seen, and, as far as I can discover, no clear rules have been laid down for their treatment. To the members of this Society who devote themselves especially to surgery, I need hardly say that no question of amputation arose in my mind;

[1] Read before the Philadelphia County Medical Society, March 20, 1884.

but to those in pure medical practice I would say that when the main vessels and nerves of a limb remain intact, the injury to the soft parts having been produced by the bone itself, not the fracturing force, almost any degree of shattering of the bones may be recovered from, in the young, without amputation. Two lines of treatment then offered for consideration, namely, the simple return of the bone, closure of the skin-wound, drainage, and trusting the case to nature; or the resection of the injured bone. Theoretically the first would have seemed the better course, promising no shortening of the limb, and the retention, in a measure, of the power of the deltoid. In reality, however, the chances of union were not one in a thousand; and if not union, then necrosis with its consequent shortening; necrosis, too, meaning months or years of inflammation and suppuration, matting the muscles together so that when recovery occurred — almost necessarily by an operation — the usefulness of the limb would be but slight. Resection, on the other hand, offered the complete removal of all injured portions of bone, and with them the most important factors of trouble after such an injury, thus permitting rapid healing, and the smallest possible amount of inflammatory adhesions between muscles, tendons, etc. If the bone had been simply returned, the risk to life would have been greater, owing to the prolonged suppuration incident upon the separation of the necrosed bone and the deep-seated abscesses so common after compound fractures. Against it was the absolute shortening of the arm, with the prospective cessation of growth due to removal of the upper humeral epiphyses.

The actual result, I think, bears me out in the course of treatment pursued, for I hardly think that in seven weeks he would have been in so good a condition, with the wound soundly healed, if I had followed what is often but falsely called the "conservative" plan of treatment. I believe that true conservatism indicated exactly what I did. The amount of shortening would not have been much less had the case been left to nature and necrosis. Had this occurred union of the severed head could not have taken place, and then the same shortening would have obtained as surely as if the epiphysis had been removed. Army experience has shown that when a portion of the upper end of the humerus is removed for injury nothing is gained by leaving the uninjured head, since it necroses.

Although not cognizant of this fact of experience at the time of operation, anatomical knowledge, general surgical principles, and experience induced me to arrive at a conclusion by *a priori* reasoning, which I have since found that extended experience had already proved.

I believe, therefore, that, theoretically and from experience, resection ought to be performed for such injuries. It is hardly necessary to say anything about the operation itself, since each case must be a rule for itself, the only point being to remove the bones with as little additional damage to the soft parts as practicable. The wound was dressed antiseptically, and when I transferred the wards to my colleague, Dr. Packard, no suppuration had occurred, and there was not the slightest inflammatory blush about the wound. He did uninterruptedly well, and the wound was soundly healed in less than seven weeks, the greater part at a much earlier date.

Sharply contrasted with this case and its results is that of the patient from whom the next specimen was removed, where the head of the humerus, luxated and partially fractured, and protruding through the skin of the axilla, was *reduced* instead of being resected. Here the tension of irritated lacerated muscles, conjoined with the necessarily imperfect drainage, kept the injured bone bathed in unhealthy pus. This with the original injury resulted in an osteomyelitis, which necessitated my amputating at the shoulder-joint. I believe had the head of the bone been removed a fairly useful limb would have been the result at the end of a few weeks' treatment, while instead, after three months of illness and risk to life, amputation was the best I could do for him.

COMPOUND LUXATION (WITH FRACTURE) OF THE SHOULDER-JOINT.

—— ——, aged thirty years, man, three months ago had his right arm caught by the belting, and drawn over a large drum in a position of extreme abduction and probably of extension. The head of the bone was luxated, the greater tuberosity torn off, and the caput humeri thrust through the axillary integuments near the anterior axillary fold. When I first saw him at the Episcopal Hospital after the accident he was very pale, with a constant discharge of pus from an opening at the site of the old wound, that is, near the anterior axillary fold, while the orifice of another deep-seated sinus was seen over the middle of the triceps, on the outer side of the arm. A probe introduced into the anterior sinus readily touched the denuded carious head of the humerus. I attempted to exsect the head of the bone, but when prepared to saw it, after its protrusion through the wound, I found such evidences of osteomyelitis as to render amputation at the shoulder-joint necessary. He did well, and recovered, but even some months later a sinus existed, doubtless the result of necrosis of some of the fragments of periosteal bone produced by that irritated structure. As before said, had the head of the injured bone been excised a useful arm would have probably resulted.

The third and last case is one where a comparatively trivial injury, owing to non-treatment at first, resulted in a condition which demanded resection of the shoulder-joint.

CHRONIC ARTHRITIS OF THE SHOULDER-JOINT: EPIPHYSEAL ABSCESS OF THE HUMERUS.

Anna M., aged seventeen years, was admitted to the female surgical ward of the Episcopal Hospital May 14, 1883. One year ago last May she fell down stairs and struck her shoulder. She was unconscious for a short time, but was soon able to walk home. The arm did not become inflamed, and seemed to the patient well. Nine months after the fall she noticed pain in the shoulder, and an elevated papule formed near the joint, which was opened at the dispensary. This relieved the pain, but left a fistulous tract discharging healthy pus. She attended the dispensary until the 14th of last May, when she was sent into the house, Dr. Seltzer, the assistant surgeon on duty, having touched dead bone with the probe. After admission she had pain from time to time, gradually increasing in intensity until shortly before operation. Other free openings for drainage were made by Drs. Simes and Kelley. The probe detected an apparent sequestrum within the humeral head. Diagnosis, epiphyseal abscess.

The operation showed complete destruction of the

joint, a carious and denuded humeral head, with an abscess about the epiphyseal site containing a sequestrum. The glenoid cavity was denuded of cartilage and roughened. The portions of head and shaft, such as you see, were removed, while all the glenoid cavity was cut away with the gouge-forceps except where the long head of the biceps was attached. Further details of the operation are unnecessary. The patient was practically well at the end of two weeks. Perfect quietude of the joint at the outset might have averted all subsequent trouble.

What was the condition here after the accident? Probably the bursæ and fibrous tissues surrounding the joint were involved, and the vascular epiphyseal cartilage was congested from the jar and injury of the fall. Congestion of all these parts, instead of being relieved by complete functional rest of the articulation, with the local application of ice, leeches, etc., as appeared indicated, was kept up by the girl following her usual occupation of housework. Although in no sense markedly strumous, yet the tendency was in that direction. As the congestion increased inflammation and suppuration were set up in the bursæ, the disease spread to the articulation, gelatinous arthritis with epiphyseal abscess supervened notwithstanding the skillful treatment of my colleagues who, *too late*, had the opportunity of treating the case.

REPORT OF A SUMMER COURSE IN OBSTETRICS.[1]

BY C. M. GREEN, M. D.

THE cases included in this report were attended during the summer of 1883 by a class of six second-year students under my supervision and instruction. The report is based on the records of the students; but their observations were in many instances verified or corrected by my own.

	Cases.	Males.	Females.	Total.
Primiparæ	9	4	5	9
Multiparæ....	34[2]	14	21	35
Total.....	43	18	26	44

The youngest primipara was nineteen years of age, the oldest twenty-three: the youngest multipara was twenty, the oldest thirty-eight.

There were two cases of ante-partum hæmorrhage: one case occurred three weeks before delivery, without apparent cause, due presumably to a slight placental detachment by painless uterine contractions. The other case, in which the hæmorrhage was considerable, occurred between the fifth and sixth months: the woman had been in a drunken mêlée and had been kicked and beaten. She was found with a temperature of 102° F. and very restless: the fœtal movements were much exaggerated. She was kept in bed for several days, and the uterine irritability controlled with morphine, and she was delivered at full term of a living child. There was one case of sciatica in the second month, and another of obstinate neuralgia in the face, head and back which lasted throughout pregnancy and ceased only several days after the termination of the labor.

POSITION AND PRESENTATION.

O. L. A.	O. R. A.	O. L. P	O. R. P.	Foot: S. A.	Head: Position Uncertain.	Total.
29[3]	3	1	2	1	8	44

The eight cases in which the diagnosis of position was not made were not reached by the attendant until after the child was born, or until after rotation had occurred which brought the head into the conjugate diameter of the pelvic outlet.

AVERAGE DURATION OF THE STAGES OF LABOR.

	Cases.	1st Stage.	2d Stage.	3d Stage.
Primiparæ....	5	13 h. 44 m.	1 h. 23 m.	17.4 m.
Multiparæ....	27	8 h. 44 m.	45 m.	16.5 m.

In a recent work by Dieterlein of Paris on The Natural Delivery of Primiparæ, which is reviewed in the *Centralblatt für Gynäkologie*, No. 47, 1883, the average duration of first labors is placed at 15 hours: of the five cases in this report the average duration was 15 hours 24.4 minutes. The duration of the expulsive stage is placed by Dieterlein at 1 hour 15 minutes: in my five cases the average duration of this stage was 1 hour 23 minutes. Dieterlein bases his calculations upon cases below thirty years of age; for those above that age the labor is correspondingly longer, especially the second stage. My cases were between nineteen and twenty-three years old and therefore come within the limits of those on which Dieterlein based his calculations.

THE THIRD STAGE.

In all the cases but two the placenta was expelled by the uterus or expressed by the method of Credé: in two cases it was necessary to introduce the hand.

There were two cases of moderate post-partum hæmorrhage, which yielded readily to ergot, ice and compression of the uterus; and one case of severe hæmorrhage, which was finally checked with injections of iced-water and vinegar.

Of the placentæ one was very large and had several cretified nodules and plates. In one case the cord had two small diverticula about six inches from the umbilicus: in another, the cord was forty-eight inches long and was twice wound about the child's neck. In the case of twin labor the placentæ and membranes were distinct, and the fœtuses were male and female.

STATISTICS OF THE PERINÆUM.

Of the thirty-four multiparæ the perinæum was in no instance ruptured: of the nine primiparæ the perinæum escaped rupture in six cases. In one of the three cases in which rupture occurred the tear was slight and required no operation. In the second case, in which podalic version was performed, the perinæum was torn superficially for half an inch: the tear was

[1] Read before the Boston Society for Medical Improvement, April 14, 1884.

[2] Including one case of twin pregnancy.

[3] In two cases the head was extended and the brow presented.

lightly dusted with iodoform, the vagina kept clean with a one per cent. carbolic acid solution, and healing took place. In the third case, the patient being exhausted after a first stage of twenty-four hours' duration, Dr. G. P. Twitchell, in my absence, very kindly attended and delivered with forceps: the head was arrested in the superior strait, and in the extraction the perinæum was torn nearly to the sphincter: three sutures were inserted by Dr. Twitchell, the vaginal douche employed, and perfect union took place.

AVERAGE FŒTAL WEIGHT AND LENGTH.

	Cases.	Weight.	Length.
Males.....	16	8 lbs. 14.25 oz.	19.7 inches.
Females ..	24	7 lbs. 5.00 oz.	18.9 inches.

The largest boy weighed 11.25 lbs. and measured 20.0 inches.
The smallest boy weighed 6.00 lbs. and measured 18.5 inches.
The largest girl weighed 11.00 lbs. and measured 21.0 inches.
The smallest girl weighed 3.50 lbs.

THE PUERPERIUM.

There was one maternal death, that of Frau R., a Bavarian, thirty-seven years of age, who had had nine children and one abortion. When about six months advanced in this, her eleventh, pregnancy, she had double pneumonia under the care of a Boston Dispensary physician, during which sickness she said she raised much blood. Three years before she had had acute rheumatism with heart complication. I first saw her when she was about seven months pregnant and found her very weak, with extensive œdema of legs and feet, and a loud, systolic, apex murmur due to mitral insufficiency: she became deeply cyanosed on slight exertion. She was treated with digitalis and acetate of potassium, which greatly reduced the œdema and improved the respiration: she also took iron, and by the time her labor was at hand she was in a tolerably good condition: nevertheless I looked forward to her delivery with some apprehension. Her labor was tedious, lasting twenty-four hours, but was in every way normal until after the placenta was expelled, when there was moderate hæmorrhage: this was promptly controlled; but it recurred with some severity within two hours, and was again checked with pressure and ice. She did well up to the tenth day, the temperature never exceeding 99.5° F., when she took cold and suffered a return of her former symptoms: she was not seriously sick, however, until ten days later, when there was found to be dullness and bronchial respiration from the angle of the right scapula to the base of the lung, with moist and sibilant râles. She was then removed to the City Hospital, where death ensued in two days, three weeks after labor; but although occurring in the puerperal period, the fatal issue can be only indirectly, of course, ascribed to childbirth.

The other cases convalesced normally. Thirty-eight mothers suckled their infants, and three more could have done so had their infants lived. In two cases only was the mother unable to nurse.

The infantile mortality amounted to four cases: —

(1.) The fœtus weighed ten pounds and was born healthy; but the mother's milk failed in three or four days, and the child succumbed to bottle-feeding when three weeks old.

(2.) A quintipara, thirty-five years of age, suffered with palpitation, dyspnœa, cough, neuralgic pains and difficult locomotion for two weeks or more before delivery, and was wholly unable to walk in the last week. Her abdomen was greatly distended by dropsy of the amnion, and an enormous quantity of liquor amnii escaped when the membranes ruptured. A feeble, female child weighing five and one quarter pounds was born after a labor lasting seven and a half hours: respiration was established by alternate immersion in hot and cold water; but the child survived only two and a half hours. The placenta was enormous: the cord was long and wound once about the child's neck. There was moderate post-partum hæmorrhage, which was controlled with ergot and ice: the woman made a normal convalescence.

(3.) The third instance of fœtal mortality occurred in the case of a nonipara affected with moderate hydramnios. The child was much emaciated, weighed four and a half pounds, and survived only three hours. Throughout the progress of the case the woman persistently refused vaginal examination on account of her experience in her last preceding labor: on that occasion, she affirmed, her attending physician, after vaginal examination, informed her that delivery would not take place for several days; he therefore gave her a sub-cutaneous injection of something, presumably morphine, and left her. On awakening the woman found her child born, and strangled with the cord wound three times about its neck: she therefore concluded that treatment was dangerous, and that vaginal examination was of no use except, to use her own words, "to gratify a morbid desire on the part of the physician."

(4.) The fatal issue in the remaining case was due to imperforation of the anus. The head presented, O. R. P.; but it was arrested high up: forceps were therefore applied and the head brought to the pelvic floor: anterior rotation then took place and the labor terminated normally. The cord was four feet long and was twice coiled about the child's neck. The child weighed seven and a half pounds and was apparently healthy: the atresia ani was overlooked at the time and was not discovered until the next day. Another day was consumed in obtaining consent to an operation, and on the morning of the third day an attempt was very kindly made by Dr. Beach at the Massachusetts General Hospital to establish an opening with the bowel: as yet there had been no vomiting and the general condition was good. When the child was placed on the table meconium was first observed oozing from the meatus. There was a slight dimple at the proper place for the anus, and here a careful dissection was made in the hope of entering the rectum. At a depth of about one and a half inches a cavity was opened and about an ounce of meconium escaped: it was thought at the time that the opening was made into a fistulous connection between the bladder and the rectum. The child survived the operation for thirty-six hours; but during this time there was no further escape of meconium: no autopsy could be obtained.

OTHER CASES OF INTEREST.

(1.) Super-rotation: —

This phenomenon was observed in a fifth labor with a small child: the head presented, O. L. A., and the occiput normally rotated to the arch. After the birth of the head, however, instead of the usual rotation of the shoulders, a complete rotation took place, the child's face turned to the mother's left side, the left shoulder

came to the arch, and the child was born as if originally in right position.

(2.) A case of chronic Bright's disease with severe uræmic vomiting: —

This occurred in a nonipara, thirty-five years of age, in whose second pregnancy premature labor had been advised on account of severe vomiting: the advice was declined, however, and the child was born still. Her sixth, seventh and eighth children were also stillborn coincidently with uræmic vomiting. In the present instance labor set in two days after severe vomiting began and progressed normally: no medicinal treatment succeeded in checking the vomiting until, after the child was born, croton oil was given to the extent of free catharsis, with ice to epigastrium and head. The child was born alive and the woman made a good recovery, so far as the labor was concerned.

(3.) A case of suppression of urine: —

B. C., aged twenty-two, who had never menstruated since her first pregnancy, and now pregnant for the third time, was seized, when about six months advanced, with vomiting, severe headache, œdema of the legs and a gradual suppression of urine. On the day before total suppression the amount passed in twenty-four hours was only two ounces: the specific gravity was 1.018, there was a trace of albumen, a little blood and renal epithelium, and hyaline and fine granular casts. Under the use of elaterium, digitalis, and acetate of potassium the kidneys resumed their function in forty-eight hours; rectal injections of chloral hydrate and bromide of potassium were employed, but failed to relieve the headache. One month later the symptoms returned and, as the child was then viable, I urged the induction of premature labor; but the operation was declined: the patient was therefore treated with saline cathartics and diuretics, and finally gave birth at full term to a living male child weighing nine and three fourths pounds. The woman made a good recovery and her urine was free from abnormal constituents two weeks after labor.

(4.) Two cases of simple flat pelvis: —

Case I. A primipara, aged twenty-one, had been in labor thirteen hours: the os was dilated, the membranes unruptured. The fœtus was in left position, the sagittal suture was in the transverse diameter of the brim, the head was extended and the brow presented. The pelvis was slightly contracted antero-posteriorly and, in accordance with the usual mechanism in such cases, the head was seeking to enter the pelvis by its bi-temporal diameter. The head was at once flexed by pressure on the brow; but with the next pain it re-extended. The head was again flexed and forceps applied; but, as might have been expected, the first traction again extended the head. Believing that in such cases version affords a far better chance of delivering a living child than the prolonged use of long forceps, and that, if carefully performed, version is not more dangerous for the mother than the high forceps operation, I at once performed podalic version and delivered a living female child weighing ten and one quarter pounds. The perinæum was torn half an inch, but healed with the use of iodoform and the carbolized douche. The woman's temperature never exceeded 98.5° F., and she made a normal convalescence.

Case II. A sextipara, aged twenty-nine, had been in labor twelve hours: the fœtal position was left, the sagittal suture was in the right oblique diameter of the pelvis, the head had engaged by its bi-temporal diameter and the brow presented: the os was dilated and the membranes unruptured. The head was at once flexed, the membranes ruptured and forceps applied at the superior strait; but two efforts at traction resulted in again extending the head. The conjugate diameter was slightly contracted and it seemed to me clear that it would be unwise to again attempt delivery with forceps: I therefore determined to substitute the shorter, bi-mastoid diameter for the bi-temporal, and at once performed podalic version. The extraction was difficult, as the child was very large: the arms were brought down as soon as within reach; but for some moments it seemed impossible to extract the head. Aided, however, by the powerful, evenly distributed, downward pressure of the attending student I finally delivered an asphyxiated fœtus which weighed eleven and one quarter pounds. The child was resuscitated after half an hour's exertion and subsequently did well: the mother made a rapid and normal convalescence.

(5.) A case of symmetrically contracted, or æqualibiter justo-minor, pelvis, with slight scoliosis: —

The patient, twenty-four years of age, was delivered of her first child when nineteen years old: forceps were used and the child was stillborn. Her second child was born naturally one year later, but lived only fifteen minutes. She had been in labor with her third child sixteen hours when I saw her: the os was fully dilated two hours before, the membranes had ruptured and the expulsive pains were strong but ineffectual. The head had engaged in the right oblique pelvic diameter, the position was left and the head was markedly flexed: the fœtal heart was beating. I applied forceps immediately and with some difficulty delivered in twenty minutes a living female infant weighing eight pounds, the head maintaining throughout the extraction a position of extreme flexion. The child did well and the mother made a rapid and normal convalescence.

From the previous obstetric history of the patient, from inspection of the pelvis, and from the peculiar mechanism of the labor it was evident that there was pelvic deformity: subsequently therefore I made careful measurements with a view to determining the nature thereof. The woman was below medium stature and her bones were small and delicate. There was no history nor physical evidence of rickets except a slight scoliosis which resulted in tilting up the pelvis on the left side, whereby the left iliac crest was about an inch higher than the right: there was no imperfection in the gait, nor could I detect that there was any compensatory curvature of the sacrum. The external measurements of the pelvis were as follows: —

	Normal Average.	This Case.
Circumference of pelvis	90 cm.	77.0 cm.
Between iliac crests	29 cm.	25.0 cm.
Between ant. sup. iliac spines	26 cm.	23.5 cm.
External conjugate	20 cm.	17.0 cm.

It was evident from these measurements that the pelvis was contracted in all its diameters, and so far as I could detect the contraction was a symmetrical one. By computation from the external and the diagonal conjugate I estimated the conjugata vera to be from 8.0 to 8.7 c. m., that is, from 3.2 to 3.5 inches, — a contraction

of from 0.5 to 0.8 of an inch. There was of course no means of accurately measuring the transverse diameter; bat I estimated that the contraction in this diameter was about 0.5 of an inch.

The mechanism of the labor was quite characteristic of the justo-minor pelvis; that is, the head entered the pelvis in an oblique diameter and passed through the canal in a state of extreme flexion; whereas in the simple flat pelvis, or in any case where the conjugate is contracted and the transverse diameter of normal length, it is usual for the head to enter by the transverse diameter with more or less lateral obliquity of Naegele: in this latter class, too, instead of assuming a position of marked flexion, it is the rule for the head to extend and enter the pelvis, if at all, by the bi-temporal diameter, as illustrated in the two preceding cases.

From the existence of the lateral curvature of the spine, presumably of rachitic origin, and from the fact that the diminution in the distance between the iliac crests was somewhat greater than that between the spines, and again from the fact that the conjugate was perhaps a trifle more contracted than the transverse diameter, I was at first led to believe that this pelvis should be classed as of the generally, asymmetrically contracted, flat, rachitic variety. But the mechanism of the labor was not such as obtains in that class of pelvis; moreover I was unable to detect other evidences of rickets, and the pelvis seemed to me symmetrical. I therefore believe that if rickets existed in early life, it was recovered from before the pelvis was affected thereby to any appreciable extent; or rather that its influence was exerted in the disturbance of nutrition which caused a premature suspension of bone-growth rather than a bony deformity.

PERIURETHRAL PHLEGMON.[1]

BY THOMAS WATERMAN, M. D., BOSTON.

THE following cases illustrate both mild and severe attacks of periurethritis, although the *most* severe and dangerous cases complicated with urinary fistula have not been met with by me.

I have retained the somewhat antiquated term *phlegmon* because the disease was first described under that title; it should be borne in mind, however, that it is to be interpreted in this paper as meaning simply an abscess, and that it has *not* a distinctly phlegmonous character, nor is there violent inflammation or gangrene of the cellular tissue. Some of the cases may appear trivial, but they are reported on account of their *rarity*, which consists in the fact that *they occurred as a complication of simple gonorrhœa*, and have nothing to do with the every-day abscesses of the penis and scrotum resulting from the urinary infiltration of tight strictures or accidental wounds of the urethra. These four cases are all I have met with in sixteen years.

CASE I. A. B. C., a police officer, thirty-five years of age, of steady good health and temperate habits, presented himself to me in 1879, with the following history, namely: three weeks previously, after impure sexual connection, he contracted urethritis of mild type, which readily yielded to the same treatment which he had employed in a former case of the disease. Three days before I saw him he had noticed a swelling on the right side of the frenum. On examination I found a small globular tumor, somewhat less than a centimetre in diameter, slightly sensitive to the touch, and obviously containing liquid. I suggested incision, which was refused. Three days later he came again and showed me that it had opened spontaneously by a rather small orifice. He then stated that three years before he had had gonorrhœa, which was followed by a similar small abscess, and, he thought, in nearly the same situation. The discharge from the urethra had diminished and troubled him but little. He said that he could now take care of both clap and phlegmon himself, and I saw him no more.

CASE II. J. O. L., a mechanic, aged thirty. A short, slim, wiry man, but always in robust health. Never had any venereal disease before. On July 6, 1882, he had connection with a prostitute; two days later he detected a moisture at the meatus, and on that day or the next he felt a small lump on the right side of the frenum. Four days later it broke and discharged pus.

He placed himself under my care August 7th; previous to this time he had been treated by an apothecary who had medical aspirations. I found that he had a pretty free urethral discharge and an induration at the point above indicated, surmounted by an ulcer, the remains of the unhealed phlegmon. There were no indurated glands in either groin. I prescribed an injection of zinc acetate and an ointment of iodoform and cosmoline. In spite of his distinctly phlegmonous history, I thought at this time that he had a chancre. Six days later, as his sore was unchanged in appearance, I discontinued the iodoform and prescribed a lotion of chlorinated soda. The ulcer soon after healed, but the cure of the urethritis was not complete until late in September. You will ask how do I *know* that he did *not* have a chancre. Because the history was plainly that of induration, inflammation, and suppuration; because the patient was desirous of wedlock, and dreaded to such an extent the possibility of infecting his future wife that his fears amounted almost to syphilophobia. He was hypochondriacal, frequently inspected himself with the most scrupulous care to detect the earliest secondary symptoms, and came at regular intervals to me for *cross*-examination. I had him under observation for months, and failed to detect the simplest lesion of secondary syphilis.

CASE III. B. R., a lawyer, aged thirty-seven, stout, fat, and flabby. Extremely addicted to over-indulgence in sexual intercourse both at home and abroad. He had connection with two different shop-girls on February 9th and February 14th, 1880. He came to consult me February 17th, having noticed a moisture at the meatus the day previous. Two days later he had chordee. Nothing unusual occurred until March 5th, when an induration was noticed on both sides of the frenum. Fluctuation was detected five days later, and an incision was made on both sides. At the time of the incision the abscess was globular in form and bilobed by reason of the constriction exerted by the frenum. A few days later a probe could be passed through from one wound to the other beneath the frenum. At about this time I incautiously (as it proved) one day told him that the wound was now fistulous, and that it would be extremely difficult if not impossible to heal it without dividing the frenum. It seems that he had

[1] Read before the Boston Society for Medical Observation, February 4, 1884.

had a fistula in ano some years before and was not pleased at the prospect before him. Without informing me of his intention, he went immediately to the surgeon who had treated him for the anal fistula and showed him his penis. He was then rather bluntly and gruffly told that he had a chancre, and that he had secondary symptoms at that very moment. Back he came to me in terror and told me the story. I carefully examined him, and finding no indurated glands in the groins, and not a trace of secondary syphilis, I endeavored to reassure him. He had at this time a patch of ordinary herpes on the lower lip. I then went with him to Dr. F. B. Greenough, who, after hearing his story and examining the lesion, coincided with me in the diagnosis of periurethral abscess and dissenting from the "snap" diagnosis of the surgeon referred to above. A seton was suggested; it was introduced and retained for a considerable time. No benefit ensued from its use either before or after removal.

May 29th the frenum was divided, producing a large, flat, ulcerated surface, and a variety of stimulating applications succeeded each other in a vain attempt to induce it to heal. Its centre was somewhat depressed, and this was frequently probed, but neither the finest probe nor colored urethral injections ever revealed any communication with the urethra.

September 5th the patient consented to an operation. He was accordingly etherized, and a Curtis's sound introduced to distend the urethra to its fullest extent at the site of the ulcer. The granulating surface was carefully pared off as deeply as was consistent with preserving the integrity of the urethra, and the indurated margin refreshed. The edges of the wound were then brought together longitudinally and united with several fine sutures. All went well for a few days, the sutures had been removed, and silk floss moistened with collodion applied to support the wound. About five days after the operation an erection occurred and the edges of the wound were torn open. The upper and lower ends of the wound had healed, however, and the sore, diminished in size, granulated healthily and was soundly healed about a month later under the use of black wash and occasional touches of lunar caustic.

As this patient was a married man he was as anxious as Case II. to know positively whether or not he had contracted syphilis. He was, therefore, diligent in his personal examinations, and reported to me at regular intervals for a long time after the final cure. Four years have now elapsed, but no secondary lesions have ever appeared. His gonorrhœa ceased coincidently with the cure of the phlegmon.

CASE IV. E. W., a clerk, aged forty-eight, short, slim, cachectic, never possessed of robust health, contracted syphilis twelve or thirteen years ago and never entirely cured. Occasionally has plantar psoriasis. Eight years ago his first attack of gonorrhœa appeared, which was accompanied by a superficial abscess beneath the fossa navicularis at the left of the frenum. It opened spontaneously and healed readily. One year and a half later a second attack was followed by abscess on the right side of the frenum. This was incised and also quickly healed. Four or five years ago a third attack of gonorrhœa was contracted. An abscess then formed higher up the penis about half way between the glans and the peno-scrotal angle and in the median line. This was incised by an apothecary and was not completely healed for ten months or a year afterwards. An indurated lump, movable beneath the skin, always persisted at the site of the abscess.

He came to me December 11, 1880, with this history, and stated that he had again caught the "clap," and that ten days after the discharge showed itself the lump before mentioned began to enlarge. On examination I saw a large, shiny, tender, purplish tumor surrounded by boggy œdema, and not distinctly fluctuating. Seven days later it was as large as a walnut and evidently full of pus. There was little or no constitutional disturbance and no dysuria, although the pressure of the tumor upon the urethra had diminished the force and size of the stream of urine somewhat. The abscess was freely incised parallel with the length of the penis, and poulticed. About a week after the incision a sinus four centimetres in length was discovered extending upwards towards the bulb. The patient declined another incision at this time, and efforts were made to cause the sinus to heal by means of carbolized injections and packing with medicated lint. These methods were fruitless, and one month after the first incision the sinus was freely laid open with scissors, no opening into the urethra was found, and the resulting wound was induced to granulate from the bottom. Three weeks later the cure was complete, the discharge from the urethra having ceased previously. An examination some months later revealed no induration at the site of the cicatrix.

Periurethritis, periurethral phlegmon or abscess is rare, half a dozen cases probably being a large number for even a specialist to see in thrice as many years. It is said that folliculitis or follicular abscess of the penis is still more uncommon. The seat of attack is similar in the two affections, but they are anatomically distinct. The former is an inflammation of the cellular tissue which connects the skin of the penis with the corpus spongiosum, and always terminates in suppuration. The latter is an inflammation of the follicles of Morgagni, which open into the urethra and is cystic in character. Owing to the rarity of periurethral phlegmon its literature is meagre. C. Hardy, Ricord, Fournier, Bumstead, Otis, Van Buren, and Keyes all devote some space to it, the French writers more particularly.

Periurethral phlegmon is periurethritis ending in abscess. Chordee is a periurethritis, but it has no tendency to suppurate. It will be noticed that only one of the cases had chordee, and it was but slight. Suppurative periurethritis is probably never idiopathic, always resulting from acute urethral inflammation, leaving out of consideration those more common cases caused by infiltration in connection with stricture.

It appears from Cases I. and IV. that having once happened a recurrence is to be expected at each attack of gonorrhœa. Cases II. and III. had never suffered from venereal disease previously, and may be heard from again in the future. The phlegmon may be situated at any point of the urethral side of the penis from the glans to the bulb, but it is said that the points of election are the neighborhood of the frenum and the peno-scrotal angle. Those near the frenum may be limited to one side, as Cases I. and II., or both sides may be involved as in Case III. They are globular, not large, and superficial. The abscesses higher up on the penis, as Case IV., are larger, deeper-seated, occasionally retard the flow of urine, and sometimes cause constitutional disturbance. The abscess usually opens externally, and this is the most favorable termination. It may, however, break into the urethra,

and subject the patient to the grave dangers of urinary infiltration and sloughing of the cellular tissue of the penis and, perhaps, of the scrotum also. In some cases the abscess breaks both internally and externally.

In regard to treatment it is self-evident that the phlegmon should be incised freely as early as possible after suppuration is definitely established. If possible any sinuses, which may exist, should be detected at the same time, and laid open to their extreme limit. The resulting wound should then be packed with lint, and allowed to granulate from the bottom. The cure in Case III. would doubtless have been less chronic if the bilobed abscess had been opened transversely, and the frenum divided in the first instance. Much troublesome induration, which prevented cicatrization, would thereby have been avoided. The sinus in Case IV. should have been laid open when the abscess was incised, and would have been if the patient had been etherized. If the abscess breaks into the urethra a counter-opening may be made externally at once, which is probably the most prudent course, or we may wait for the possible occurrence of infiltration, which Fournier says does not commonly happen. A urinary fistula may be the termination of a phlegmon, and is more liable to result near the bulb than towards the glans. Hardy says that "at the latter place it gives rise to an accidental hypospadias which is difficult to cure."

Perhaps the most interesting practical point connected with this complication of gonorrhœa is its liability to be confounded with a primary syphilitic lesion, as illustrated by Cases II. and III. When it is a typical phlegmon, already containing pus, the diagnosis is easy. In the initial stage of induration, however, on one side of the frenum, before suppuration is established, the physician may well be pardoned for postponing a positive opinion until more light is thrown on the case by subsequent developments. Again, as in Case II., where a patient does not present himself until the phlegmon has opened, and it is seen for the first time in the condition of a small granulating ulcer with indurated base, expectant treatment should be practiced, and a long period of incubation allowed to occur before a final opinion concerning the nature of the lesion is given.

REPORT ON ORTHOPEDIC SURGERY.

BY E. H. BRADFORD, M. D.

LENGTH OF LIMBS AFTER DISEASE OF THE JOINTS.

THAT limbs, after resection of the joints and after disease, sometimes cease to grow or grow less rapidly than the healthy limb is a well-known fact, and has been explained as an effect of the disuse of the limb, or as a result of the disturbance of the nutrition of the bone through injury of the line of the epiphysis. Wolff,[1] after a number of measurements, has come to the conclusion that neither of these is sufficient to account satisfactorily for the result. A shortening takes place not only of the bones which were affected by the disease or the operation, but also those which apparently have been healthy. For example, ten or twelve years after disease or resection of the hip a shortening of the femur will be noticed, and a shortening of the tibia and fibula to a slight extent, while a much more marked arrest in the size of the foot and in that of the patella is almost constantly observed. And after affections of the knee and shoulder a lengthening of the humerus and femur is sometimes noticed. Diminution in the size of the patella is not observed in affections of the knee out of proportion to that of the limb, while a shortening of the foot is noticed.

The explanation of these facts offered by Wolff is that a primary joint affection is followed by a secondary affection of the nervous system of the limb, which gives rise to an arrest of development of the bones of the limb. Analogous to this is what is seen in infantile paralysis and progressive muscular atrophy, and in the nervous muscular atrophy described by Valtat in inflammations of the joints.

[1] Vide Berl. klin. Wochenschr., 1883, Nos. 28–30.

TUBERCLE BACILLI IN JOINT AFFECTIONS.

Koch, Marchaud, Schuchardt, and Krause have all come to the conclusion that the bacillus plays an important part in the ætiology of fungous osteitis and arthritis, but they agree as to the great difficulty in demonstrating the presence of these organisms as the number present is relatively small. Müller has, at the Göttingen Clinic, been able to examine for the presence of bacilli the bones from thirty cases removed by resection. In the majority of cases a few bacilli were to be found after examining a number of sections, but in a number of specimens of undoubted tuberculous ostitis the result was entirely negative. In one case, however, of coxitis, in the very earliest stages, appearing a short time before death from phthisis, and manifesting the symptoms of pain and contraction of the limb, and at autopsy a focus of tubercular granulations at the head of the femur, near the insertion of the ligamentum teres, perforation of the cartilage, pannus of the cartilage around the spot of cartilaginous perforation, and congestion of the synovial membrane, the tubercles in the granulations were numerous, but not caseous, but on examination a very large number of tubercle bacilli were found, and the writer suggests that, possibly, the bacilli may, in the earlier stages, be present in larger numbers than after the ostitis is more destructive, though the matter is one which will need further investigation. It would appear, however, that unlike those in tuberculosis of the lung the bacilli of chronic disease of the joints promise but little for diagnosis or prognosis.

TREATMENT OF TUMOR ALBUS BY ARSENIC.

Landerer[2] reports several cases where marked improvement followed the administration of arsenic internally (0.004, 0.008, and 0.012 in pills daily for several weeks), and in one case the subcutaneous injection of an aqueous solution of acidi arsenicosi, 1 to 1000.

The writer does not regard arsenic a specific against tuberculosis, but, relying on experiments on guinea-pigs, he concludes that it increases the resisting power against tuberculous infection.

STATISTICS OF RESECTION OF THE KNEE.

Mensing[3] has collected eighty cases of total and three of partial resection of the knee, operated upon at Kiel, and nine operations of removal of a wedge-shaped piece of bone for rectangular anchylosis. Forty-eight of these (52.01 per cent.) were discharged well. The average shortening was two and one half centimetres,

[2] Centralblatt f. Chirurgie, November 24, 1883.
[3] Centralblatt f. Chirurgie, No. 49, December 8, 1883.

and flexion only occurred in two cases; two had good motion; one only slight motion. From thirty-two of these later information as to their condition was obtained, and in three cases a moderate flexion had taken place; in two a relapse had occurred, followed in one case by a second resection, and in another by amputation.

In thirty-four patients the excision was not perfectly successful (that is, thirty-seven per cent.), fourteen undergoing a subsequent amputation, and twenty having an unhealed sinus at the time the patients left the hospital. Of these twenty the ultimate results of thirteen were obtained: in ten cicatrization took place; three died. Of the fourteen secondary amputations ten recovered, and two died.

Ten patients who underwent excision at the clinic died directly from the operation, five of pyæmia, one of Bright's disease, one of general tuberculosis, two of exhaustion, one of hæmophilia.

These operations were performed in the years from 1857 to 1883, and the time is divided by the writer into three epochs: First, before the introduction of Listerism and Esmarch's bloodless method; Second, after these were introduced; Third, after the introduction of Neuber's permanent dressing. The mortality in the first period in twenty-one cases was 33.03 per cent.; in the second period, twenty-three cases, was 8.7 per cent.; and in the third period, forty-eight cases, two per cent. The length of time required for healing in the first two periods averaged 129 days; in the third period eighty-nine days.

RESECTION OF THE KNEE.

Ollier[1] reports that before the introduction of antiseptic surgery his mortality in resection of the knee was eighty per cent.; since then his mortality has fallen to fourteen per cent.[2] Formerly he used excision simply as a life-saving measure, but at present he feels justified in recommending it as a means of shortening the course of the disease. In children, however, he is disinclined to perform resection for fear of limiting growth. In operating Ollier is careful to spare as far as possible the periosteum and ligaments, though the capsule or ligaments should not be spared if diseased. A straight incision is only used for traumatic cases. In fungous disease an H-incision is to be used. The two lateral incisions should be as far forward as possible in order to spare the lateral ligaments. If the patella is affected it should be removed. The bones are wired together as well as the ends of the cut ligaments, and drainage tubes are to be inserted above and below if the posterior part of the capsule is diseased. In traumatic cases a single straight incision is advised dividing the patella. This method he has only tried on the cadaver, but is recommended because the ligaments are best spared in this way. Resection is to be performed in deformity at the knee if ostitis is present. If, however, perfect cicatrization has taken place with a rectangular position of the limb an osteoclast is to be used, but one devised that the rupture should take place directly at the desired point; but in some cases osteoclasis cannot be used on account of cicatricial contraction at the back of the knee. A wedge-shaped piece of bone is to be removed in these cases, and this is best done at the point of the obliterated joint.

[1] Revue de Chir., 1883, Nos. 4 and 5.
[2] Vide Revue de Chirurgie, February 10, 1884, page 157.

THE ACTUAL CAUTERY IN CHRONIC JOINT AFFECTIONS.

The routine French treatment for tumor albus is "boutons de feu" (that is, touching with the galvanocautery), immobilization, repeated blisters, tincture of iodine. The want of effect produced by ignipuncture has suggested more thorough treatment, namely, the pushing of the cautery directly into the bone and exciting a cicatrizing sclerosis. It is said that simple ignipuncture succeeds where it is not indicated, and fails where it is.

Curetting is a favorite method of Volkmann, Schede, Boeckel. It is a method, according to M. Vincent, either insufficient or excessive, excessive in simple granular fungous synovitis, and insufficient where excision is demanded, it being impossible to completely remove by a curette all the foci of disease. Ollier's method is described as follows:[3] Before the operation the patient is to be thoroughly washed, the site of incision being scrubbed with soap and brush, and any hair that may be present shaved. The operation consists of arthrotomy, the line of incision being parallel to the axis of the limb, either a knife being used cleansed by heat or a point of the Paquelin thermo-cautery. The incision should divide the skin and all lardaceous tissues, and if necessary the joint should be completely exposed by a cross incision. If the fungosities are tolerably superficial, the Paquelin cautery will be sufficient, but in extensive cases the old-fashioned "cautery irons" will be needed to riddle the diseased bone.

In young subjects the cauterization should be pushed quite far, and is followed by excellent results. Irrigation by an antiseptic completes the operation. Iodoform is then dusted on the wound, and the limb wrapped in boracic acid compresses wet in carbolic, carbolic gauze and salicylicized cotton, mackintosh, and bandages. This dressing should reach up to the middle of the thigh in cases of affections of the knee, and the whole should be wrapped in a silicate bandage, strengthened by card-board or light wood. A second dressing is not applied for three weeks or a month.

DISEASE OF THE BONES OF THE PELVIS.

The initial site of the chronic disease of the joints is placed by the best authorities at the line of junction of the epiphysis with the diaphysis. "The point of election," to quote the words of Ollier, "is not the epiphysis but the 'region juxta' epiphysaire." Gouillaud and Ollier have pointed out that this is also the case in pelvic osteitis. Pelvic caries may be either intra-cotyloid, not distinguishable from hip disease, or pericotyloid, with difficulty separated from hip disease, or marginal, the site being partly dependent upon the age at which the inflammatory process is awakened, as before puberty the most active growth is at the junction of the three pieces of bone which form the ilium; after puberty the most active cellular process is on the margin at the epiphysis there. Acetabular hip disease is much more common than is supposed; it is regarded by the writers as at least as frequent as the femoral variety.

The most common age for marginal pelvic disease is twenty-three years, and the places most frequently attacked are the crests of the ilium, the posterior iliac spines, and the apophyses of the sacrum, anatomi-

[3] Vincent, Arthrotomie Ignée, Revue de Chirurgie, January 10, 1884.

cal points where the epiphyses are developed even in early adult life.

The early symptoms of this marginal pelvic caries are chiefly indications of visceral affections, that is, the intestine and bladder, and the appearance of abscesses either in the bladder or intestine.

In childhood frequent aspiration of abscesses and expectation are indicated, unless the hip is threatened. In case of pelvic hip disease excision naturally gives the best drainage, and perforation of the acetabulum so far from being a contra-indication to that operation imperatively demands it.

In the adult opening of the abscess is indicated, whatever its seat. If intra-pelvic, the pelvis can be trephined, an operation first done in 1778 by Boucher, and repeated with success by Verneuil.

SACRO-ILIAC DISEASE.

This affection is so rarely observed that the records of four cases are of value.[1]

One patient was a child six years of age, who recovered. A second was observed in a woman, who recovered after long suppuration. In the third case death took place after long suppuration, and an autopsy revealed extensive ostitis. The fourth patient died of phthisis, but underwent an operation of removal of carious bone by chiseling through the ilium. Riedel mentions having seen three cases, two in children of five and fourteen, one in a woman of thirty. The first was operated on by extraction of the sequestrum through an incision dividing the gluteus maximus, and in the second and third cases the iliac bones were trephined. Recovery took place in the first and third patients, the second dying of extensive caries.

REPRODUCTION OF BONE AFTER RESECTION.[2]

Experiments have been made on young dogs to determine this matter. The lower end of the femur, the patella, and the semilunar cartilages were removed subperiosteally, the saw being always applied in the line between the epiphysis and diaphysis. A complete regeneration took place, the bone consisting of the ordinary spongy bone tissue, and covered to a greater or less extent at the end with cartilage. The bone began to be developed partly from the periosteum of the diaphysis, partly from the marrow, and partly, but to a less degree, from subperiosteal tissue which had surrounded the excised portion, the formative activity of the periosteum being greater at a later stage. The surface of the tibia suffered little alteration except where the differences in pressure or mobility affected the growth of the bone.

THE FEVER OF GROWTH.[3]

Bouilly has described and named "la fièvre de croissance," the symptoms sometimes seen in growing children, which are probably analogous to those grouped in popular language under the head of "growing pains." Bouilly is inclined to classify it as a light form of osteo-myelitis which runs its course without suppuration, and is most prevalent at the time of the most rapid growth. A comparison may also be suggested with the view of the nature of rickets which has been advanced, that the disease is characterized by a faulty circulation of the bones caused by imperfect development. Bouilly's "fièvre de la croissance" appears in three forms: (1) acute, which is the lightest and most frequent; (2) an acute form with severer symptoms; (3) a chronic incipient form. All these varieties have fever and pain in the bones, chiefly in the juxta-epiphyseal zone, most frequently near the lower epiphysis of the femur. The short and flat bones are seldom affected. The joints are almost never affected, but exceptionally effusions into the joint are seen. In the lightest form the symptoms pass in thirty-six hours, in severer cases the fever may last several days and even be attended by some typhoidal symptoms, followed by a sudden fall of the fever and recovery. The chronic subacute form may last for months, and relapses may occur; the prognosis is, however, favorable. Quinine and tonics are recommended. The disease may appear from the fifth to the twenty-first year, and the symptoms may be brought on by long walks, strains, or fatigue.

ÆTIOLOGY OF LATERAL CURVATURE.[5]

Sklifosowski[4] found, on examining twenty-one cases of scoliosis, in seventeen shortening of one limb, in four the shortening was so slight as to escape observation. In eleven the right thigh was longer than the left; and in twelve the right leg was lengthened. In nineteen young persons not suffering from lateral curvature, in five a difference in length of the lower extremities was observed, and the writer concludes that a difference in the length of the lower extremities alone could not account for the existence of lateral curvature, and in all probability some disturbance in the development and growth of the bones of the spine is influential in bringing about the distortion. Confirmatory of this he found other abnormalities in the development of the skeleton (genu valgum, pes planus, valgo planus) in two thirds of the cases suffering from lateral curvature.

THE NATURE AND TREATMENT OF RICKETS.[5]

Kassowitz is of the opinion that rachitis results from an abnormally increased vascularization of the bone-making tissues. Wegner reports as a result of a series of experiments upon animals the opinion that phosphorus given in small doses for a length of time gives rise to a diminution in the amount of the medullary tissue and arrests the normal transformation of osseous tissue into medullary cells, while large doses cause the reverse condition, namely, an increase in the medullary transformation, that is, an artificial osteo-malacia. Kassowitz, therefore, has in a number of five hundred and sixty patients administered phosphorus with beneficial results, namely, a diminution of the nervous symptoms, spasm of the glottis, restlessness, sleeplessness, and an improvement in the ability to walk, an improvement in the general condition of the patient, as manifested by an increase in weight and appetite. The phosphorus is administered with cod-liver oil in from half a teaspoonful to two teaspoonful doses daily, of a mixture of 0.01 of phosphorus to 100.0 of cod-liver oil, or in older children the medicine can be given in pills commencing with a dose of half a milligramme.

OSTEOTOMY IN OBSTINATE CLUB-FOOT.

A discussion on this subject took place in the Societé de Chirurgie[6] in Paris, occasioned by a paper by

[1] Vide Tilling, St. Petersburg Med. Woch., 1883, No. 29. Centralblatt f. Chir., 1884, No. 3.
[2] Vide Bajardi, Centralbl. f. Chirurgie, No. 42, October 20, 1884.
[3] Vide Gaz. des Hopitaux, 1883, page 1034, also Nos. 136 and 137.
[4] Centralblatt f. Chirurgie, 1884, No. 3.
[5] Zeitschr. f. klin. Med., 1883, Bd. vii., p. 36.
[6] Bull. de la Soc. de Chir. de Paris, t. viii., p. 766.

Dr. Beauregard reporting successful cases. The majority of the French surgeons were strongly opposed to this method of treatment, Guerin, Anger, and Verneuil being especially so, the former claiming that except in the club-feet of adults no deformity of this sort existed which could not be corrected by tenotomy and apparatus. Polaillon and Chauvel and some others thought the operation might be of advantage in talipes equino-varus of adults.

E. Boeckel [1] makes a distinction between osseous and tendinous club-foot; the first of these can be cured by tenotomy and apparatus; in the second class tenotomy is of no use, and though improvement follows a long-continued course of treatment by massage and apparatus, yet in his experience relapses easily follow when apparatus are discontinued, the cause of this being the curling inward of the hindmost foot at the end of the step, caused by the instinctive turning of the foot inward, to aid the gait when the dorsal flexion is only possible to a right angle. Boeckel thinks that the chief hindrance to correction of the foot is in the deformity of the tarsus, which is radically relieved by extirpation of the astragalus, which he has performed four times with perfect success.

TREATMENT OF SPINAL ABSCESS.

Lacharriere [2] has collected twenty-eight cases treated by antiseptic incision dressed with strict antiseptic precautions. Of these five died, fourteen were healed without sinuses, and in nine the result was uncertain. Twenty-one cases were treated by curetting the abscess walls, and of these two died, fourteen were healed, and in five sinuses were left. This latter procedure is not possible except in abscesses of the lumbar region and of the back. In psoas or iliac abscess such a treatment is not only not always possible but in certain cases dangerous.

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[1] Gaz. Méd de Strasbourg, 1883, Nos. 6 and 7.

[2] Thèse de Paris, 1883. Also Chavasse, Lancet, 1883, ii., 1064; also Treves, International Cyc. of Surgery; Weiss, Mem. sur quelques cas. de Chir. Nancy, 1883. 124.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

April 14, 1884. The President, Dr. Charles D. Homans, in the chair.

SPONTANEOUS PHLEBITIS.

Dr. W. C. B. Fifield reported the case, which is unique in his experience. The patient, an anæmic young lady who had been occasionally treated for neuralgia during many years, had a temperature of 104–105° F., with a rapid pulse. She was dizzy, and complained of pain indefinitely situated near the great sciatic notch, and of heaviness of the left lower extremity. Being uncertain as to diagnosis, the speaker had called a competent consultant, who, while also unable to form a positive opinion, believed the trouble to be mainly hysterical, and cited an asylum case in support of this belief. The treatment agreed upon was unsatisfactory in its result, and the following evening Dr. C. E. Stedman was called in consultation.

By this time a new symptom had developed, a swelling of the leg, which was, however, still so slight as to be detected only by measurement. Pain, with high temperature and rapid pulse, continued. It was agreed to alter the last night's prescription of bromide of sodium with hyoscyamus to the bromide with chloral, and with this the patient got some rest. The case, however, went on, the calf swelling enormously and the thigh to twice its size, both pitting and assuming a white marble look, the pulse becoming 130. The treatment consisted in brandy and opium until the pain was over, and then brandy and quinine. As two grains of quinine every four hours caused cinchonism, it was omitted, thirty drops of tincture of chloride of iron being substituted. This drug caused the patient to vomit, as it often does her as well as some others, and it was in turn omitted. Dr. Fifield can find no accounts of spontaneous phlebitis. Trousseau reported it as an accompaniment of rheumatism and claimed that the cases got well with quinine and stimulants. He did not state the condition of pulse and temperature. Simpson and others have reported it as a puerperal complication, and supposed it to be of septic origin. We know that varicose veins get inflamed with formation of blood clots. The speaker had seen phlebitis as a complication of dysentery.

DR. JAMES AYER mentioned its following typhoid.

DR. C. E. STEDMAN said that a year seldom passed at the City Hospital when there were not one or more examples of phlebitis in patients, mostly men, in the third and fourth weeks of typhoid fever.

DR. C. D. HOMANS said that the nearest approach to spontaneous phlebitis that he had seen had been with a fractured thigh in which good union had occurred. He had seen it after amputation for accident in a patient over sixty. It is not very uncommon after typhoid, and in his cases has got well after a time.

DR. FIFIELD replied that he had seen phlebitis after dysentery, but never after typhoid. Arteritis occurs as a sequel of typhoid, and he mentioned a case at La Charité in Paris amputated by M. Gosselin in 1875 for gangrene, and dying from gangrene of the other leg. Both femoral arteries were found to be plugged.

EXTERNAL URETHROTOMY, WHEELHOUSE'S OPERATION.

DR. FIFIELD thought that this operation, comparatively little known here though well known abroad, was sure to grow in favor. He has done it once, so far as he knows being the first surgeon in the United States to do the operation, and has seen it done once. In the common way it is not always easy to find the urethra. In cases of extravasation of urine Bryant prefers to pass a catheter, or to open the urethra. This is more easily said than done. The speaker never leaves a catheter in, but makes incisions and tries to introduce it three or four days later. Since his own operation he has seen it very well done by Dr. H. L. Burrell.

DR. C. M. GREEN read a paper on

A SUMMER COURSE IN OBSTETRICS.[1]

DR. O. W. DOE said that he had had two recent cases in which not so much as a drachm of milk could be got at any time.

DR. GREEN said in reply to a question by Dr. Fifield as to how he successfully performed version and extraction of such large children, that the version was done in the usual way, but that great care was taken not to extend the arms and head. In the first case traction was made only during the pains: in the second case, owing to the absence of pains, the uterus was followed down with the hands of the assistant. As soon as the arms could be reached they were brought down. In the second case the extraction of the head at first seemed impossible: forceps were tried without success; and finally extraction was accomplished with the aid of powerful pressure on the uterus from above.

DR. A. T. CABOT read a paper on a case of

MULTIPLE CALCULI IN THE BLADDER,

and showed the specimens. The paper will be published in a succeeding number of the JOURNAL.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

CHARLES H. WILLIAMS, M. D., SECRETARY.

FEBRUARY 4, 1884. DR. THOMAS WATERMAN read a paper on

PERIURETHRAL PHLEGMON.[2]

DR. FITZ said that the name of periurethral phlegmon should be confined to those cases in which there was a diffuse inflammation of the tissue. These cases were rather periurethral abscess, and this difference in nomenclature may have accounted for the small number of reported cases mentioned by the reader.

DR. J. W. ELLIOT then read a paper on

THE TREATMENT OF RETROVERSION OF THE UTERUS WITH ADHESIONS.[3]

DR. C. M. GREEN said that packing will often give good results even when there is subacute peritonitis or cellulitis present. He also mentioned the following case in which packing had been used: —

The patient had her last child fifteen years ago. Since then much pain, constantly recurring attacks of peritonitis, and no ability to work. Examination shows cervix torn, uterus prolapsed, external os just within the opening of the vagina. The examination gave much pain, but nevertheless a light tampon of cotton, soaked in glycerine with ten per cent. of iodoform, was inserted. The iodoform was used because it seems to relieve the local pain. Relief soon followed. She has been under treatment two months, and is now free from pain. The uterus is higher, and more in place; the adhesions are absorbing.

In a second case there were no local symptoms, and very little dysmenorrhœa; there was some headache and a general confused feeling, but the symptoms were so slight that the patient thought an examination was unnecessary; however, when this was made retroversion and adhesions were found, and treatment with a tampon was begun. In two months the uterus was brought forward into good position by replacing the tampon twice a week. Some medication was resorted to for the headaches, but without success; when, however, the uterus had been replaced these disappeared. The after-treatment was by a pessary. This was once removed for a week, but a slight retroversion returned, which was again cured by the continued use of the pessary. He thought the treatment by tampons often proved quickly successful, and that the nervous symptoms which accompany the retroversion were often the most difficult to treat.

DR. LOMBARD mentioned the treatment by manipulation repeated every two to four days for five to ten minutes. He had seen very good results from this method even when it caused considerable pain to the patient, but he thought the reader's method better, as it gave a constant and equable pressure instead of the interrupted manipulations.

In answer to DR. SABINE as to what class of cases it was not best to undertake this treatment, the reader said that in old women, long past the climacteric, where there was retroversion without any peritonitis, and, again, in all cases where there was a local acute peritonitis.

DR. C. B. PORTER then reported

A CASE OF PILO-NIDAL SINUS.

N. L., forty-two years, jeweler, entered the hospital January 11th for a fistula in ano, which had given him trouble for about two months. The patient had a large amount of hair on the chest and other parts, and on the left buttock, in addition to an ulcerated point about two inches from the anus, which had been discharging about two months, there was a pilo-nidal sinus from which a tuft of hair projected. This was laid open by a cut some three inches in length, and a large

[1] See page 389 of this number of the JOURNAL.

[2] See page 392 of this number of the JOURNAL.

[3] Boston Medical and Surgical Journal, vol. cx., p. 193.

mass of hair removed. The wound was then dressed with iodoform and charpie and myrrh, and healed readily.

Dr. Porter then reported the following case: —

DIPHTHERITIC PERINEAL WOUND; CHRONIC CYSTITIS; BILATERAL INCISION OF PROSTATE FOR REMOVAL OF STONE; ACUTE SUPPURATIVE PERITONITIS. AUTOPSY.

January 21st. L. D. V., aged thirty eight, farmer, about seven years ago first had pain on passing water. Had at that time a stricture which he claims was not of venereal origin. About a year later he underwent the operation of perineal section. Judging from the scar the incision was made through the scrotum down to the anus. There is now only a line of cicatrix. About three years ago noticed a desire to pass water very frequently; also noticed some pain both before and after passing urine. Passed small particles about the size of rice, which were hard; also passed blood at intervals. Since then his condition has been steadily growing worse. He now can retain his urine at best only ten or fifteen minutes. Has great pain at times, which he locates both in the back passage and in penis.

January 23d. Examination by Dr. Wood. Color smoky; specific gravity 1008; sediment, much; reaction alkaline; albumen, large trace. Sediment: much pus; considerable blood; little triple phosphate; one epithelial cast seen; no large excess of bladder epithelium.

January 24th. Dr. Porter passed No. 23 sound, and in the prostate the sound struck on a solid substance which gave the feeling of stone. Examination by rectum shows a dense, hard mass situated in the prostate. Seems to be immovable, and causes pain when pressed upon. The mass appears to be about as long as the finger.

January 26th. Etherized. Dr. Porter tried to introduce a lithotrite with intention of crushing stone, but was unable to get into bladder. Patient then brought down into position for perineal section. A staff was introduced into urethra. A cut was then made into perinæum about four inches long downwards and outwards. Staff was exposed, and left lateral incision made through prostate. Attempts were made to seize the stone with forceps, but without success. The prostatic incision was enlarged, and another made on the right side in a corresponding manner, in other words, bilateral incision of the prostate. After several attempts the stone was firmly clasped by the forceps, and withdrawn. A canula was then inserted, and wound packed with sponges. This afternoon canula withdrawn, and bladder washed out thoroughly with hot phenyle. Weight of stone 1320 grains.

January 27th. Patient very comfortable. Bladder washed out with hot phenyle.

January 28th. Wound doing well.

January 29th. Patient has almost no appetite. Whiskey ℥ss. every four hours. Pulse rather weak and 120. Complains of considerable pain over abdomen.

January 30th. Complains of severe pain over abdomen, and especially over right side, extending up into chest. Has a sighing respiration, which at times is a moan. Amount of urine cannot be accurately estimated, but judging from the staining of sheets it would seem to be much diminished in last two days. Patient had poultices to side and over abdomen. Subcutaneous injections of morphia, grain one sixth, this morning, which gave some relief.

At eleven A. M. had an ounce of brandy, and a half ounce repeated every half hour after twelve.

About two P. M. was transferred to Ward D. Hot poultices and hot fomentations to side and over abdomen. At five brandy increased to ℥vi. every hour. Throat dry and parched. Talks with difficulty. Lies in a sort of stupor. Moans, and can be aroused only with some difficulty. About nine P. M. had much trouble in taking stimulants. Brandy ℥vi. Beef tea ℥iii. given hourly by enema.

The rest of the night grew weaker, and died Thursday morning at five A. M., five days after operation.

The autopsy was made thirty-four hours after death by Dr. Fitz, who showed the urinary organs in continuity. He stated that the peritoneal cavity held several ounces of thick creamy pus. The peritonæum presented a moderate vascular injection, and the intestines held but little gas. The lumbar lymphatic glands were enlarged to the size of almonds, soft, gray, and injected; the afferent pelvic lymphatics contained an opaque yellow lymph.

The bladder was firmly contracted, forming a dense, unyielding mass as large as the fist, in close apposition to the anterior wall of the pelvis, and nearly filling its cavity. The subperitoneal tissue over the fundus was abundantly fatty. On opening the bladder its cavity was found to be of the volume of a small peach. The walls varied in thickness from a half inch to more than an inch, and were incapable of distention, being largely composed of a dense fibrous tissue in which opaque yellow streaks were seen, suggestive of a fatty degenerated muscular wall. The mucous membrane was thickened and of a bluish slate color, with occasional small, shallow diverticula. A bilateral wound through the cervical portion of the bladder was continued into a perineo-urethral incision. The cut through the urinary tract was over two inches in length. The lips of the perineal opening were glued together, and the general surface of the wound was coated with opaque yellow patches, firmly adherent, and representing a superficial necrosis of its tissues.

Both ureters, especially the left, were dilated, thickened, elongated, and tortuous. Each contained a considerable quantity of muco-purulent fluid. The right ureter was large as the fore-finger, the left of the size of the thumb. The renal pelves were moderately dilated, and were connected with sacculi the size of the finger tip. The mucous membrane of the pelves and ureters was thickened, rough, gray, somewhat translucent, and showed numerous varicose, injected blood-vessels.

The kidneys were diminished at least one third in size. The capsules adherent, portions of the surface of the kidney being torn away with the former. The surface was irregularly lobulated, with gray, filmy patches. On section the cortex was atrophied, the tubular regions and Malpighian bodies indistinct. The alterations described were summarized as indicative of a diphtheritic perineal wound, lumbar lymphadenitis, and acute suppurative peritonitis, chronic cystitis and paracystitis, chronic pyelonephritis, with dilatation and hypertrophy of the ureters.

Dr. Porter also reported a case of

REMOVAL OF A FRAGMENT OF CATHETER FROM THE BLADDER.

January 15th. William L. N., farmer, aged sixty-four. Patient has an enlarged prostate, in consequence

of which he has been obliged to catheterize himself for the past six years, using for the purpose a soft rubber catheter. Sixteen hours ago, while inserting the instrument, it broke in the middle of the urethra, leaving inside a piece five inches long. He immediately put his finger on the under side of the penis and felt the piece there, but on removing the finger it slipped into the bladder.

He has no pain, but says that since the accident his urine has dribbled away constantly.

Patient was etherized, and the bladder explored with a small lithotrite, but nothing was caught. A medium-sized lithotrite, with closely-fitting, finely-serrated blades, was then introduced, and after several attempts the instrument caught a small object that proved to be, when withdrawn, a little calculus the size of a pea. After a few more attempts the lithotrite seized the catheter. The blades were then locked, and an attempt was made to withdraw the instrument, after first moving it about to make sure that the wall of the bladder was not nipped. When the blades of the lithotrite reached the middle of the urethra they were held so firmly that it was almost impossible to move them. Externally there could be felt, just at the knee of the lithotrite, a large, irregular lump. In order to explore this and make sure that the wall of the urethra was not being pulled along in front of the catheter, the urethra was slit up on its under side for a distance of one inch. A director, being then introduced, felt, by the side of the lithotrite, the end of the broken catheter. Strong traction then brought out the lithotrite with the fragment of catheter caught, an inch and a quarter from its rounded end, in the bend of the instrument. The piece of catheter lay along the shank of the lithotrite, and just at its middle was a double fold which had been made by the hitching of the end of the catheter while passing through the prostatic part of the urethra; this was the explanation of the difficulty in withdrawing the instrument, and the large, irregular lump felt in the urethra. At the moment of withdrawing the catheter it broke at the point where it was grasped by the lithotrite. It proved to be a dry and brittle piece of No. 16 French (9 E.) catheter.

A No. 12 English gum elastic catheter was then fastened in the bladder, and the patient put to bed, with a bottle and tube arranged to catch the urine. One stitch was taken in the cut on the under side of the penis, and a little iodoform applied. Patient slept comfortably all night, and had no further discomfort. The catheter was removed after forty-eight hours, and the patient discharged on the third day. His temperature rose to 100° F. on the morning of the second day and the evening of the third day, being 99° F. in the mean time. It was normal at the time of discharge.

Recent Literature.

A Manual of Practical Hygiene. By E. A. PARKES, M. D., F. R. S. Sixth Edition. With an Appendix. Volume I. Wm. Wood & Co. 1883.

The publishers of the Library of Standard Medical Authors have done a good service in issuing this excellent manual in its present shape, thus popularizing a valuable work, and awakening a deeper interest in a branch of medicine too much neglected by the general practitioner.

Chapter I. treats of Water; the quantities necessary for its use by man; modes of collection, storage, and distribution; its quality and impurities; modes of purification; effects of insufficient and impure supply; its examination for hygienic purposes. II. Air; its impurities and the diseases produced by them. III. Ventilation. IV. The Examination of Air. V. Food. VI. Its Quality, Choice, and Cooking. VII. Beverages and Condiments. VIII. Soils; their conditions, constitutions, and modes of examination.

Volume II. contains a continuation of Book I. which treats of the following topics: Habitations; The Removal of Excreta; Warming of Houses; Exercise; Clothing; Climate; Meteorology; Individual Hygiene; Disposal of the Dead; The Prevention of Disease both Specific and Non-specific; Disinfection and Deodorization; The Value of Statistics.

Book II. treats of Military Hygiene, the conditions under which recruits are admitted to service, the conditions under which the soldier is placed, the effect of military service, foreign service, military and naval, from the British stand-point.

The American appendix to this volume is especially valuable as containing not only new material, but also matters peculiar to this side of the Atlantic. Due credit is given to Massachusetts for early and valuable work in the direction of Public Hygiene. The chapter on Water by Prof. E. Waller is quite full and complete. Professor Britten contributes a chapter on the Character and Distribution of American Soils. Dr. J. G. Richardson a valuable paper on the Climatology and Meteorology of the United States. Dr. D. F. Lincoln treats of Ventilation and Warming. E. S. Philbrick contributes a clear and concise paper on Removal of House-Waste, illustrated. The paper on Food Adulteration, by Prof. E. G. Love, is especially valuable for its abstract of the legislation of such States as have enacted adulteration laws up to the present year. The New York law is quoted in full.

Brief chapters follow on Disinfection, Vital Statistics, and Sanitary Inspection.

A Manual of Pathology. By JOSEPH COATS, M. D. Philadelphia: Henry C. Lea's Son & Co. 1883.

This manual was written with the idea of furnishing a work on pathology in English to replace that of Wilks and Moxon, which has become antiquated. It is well up to the times and presents the subject in a very readable manner. This is increased for the general practitioner by numerous allusions to the clinical bearing of the changes noticed. The importance which micro-organisms play in disease is recognized, and a due place is given to their consideration and illustration.

The work has not a great deal that is original beyond the illustrations, most of which were made especially for this work. The arrangement of the material is a very good one, and can be recommended to the student and practitioner as a good exponent of the modern condition of pathology, both general and special, in a volume of reasonable size.

— An aged Welsh Druid was recently tried for burning the body of his child, but was discharged on the ground that there was no law prohibiting it.

Medical and Surgical Journal.

THURSDAY, APRIL 24, 1884.

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REFORM OF MEDICAL SERVICE ON SHIPS.

Somewhat more than a year ago the British medical journals, as well as some of the daily newspapers, were vigorously agitating the question of the medical service on passenger vessels, largely incited thereto by the statements upon the existing conditions of Dr. J. A. Irwin, whose zeal and knowledge of the subject, resembling that of Mr. Plimsoll in regard to other marine abuses, enforced attention and carried conviction.

It was expected that a measure for the improvement of the medical service on all British vessels would have been introduced into the British Parliament by the president of the Board of Trade before this. The subject, however, is one of the utmost importance to American travelers and immigrants, and indirectly in periods of epidemics — as the recent one of small-pox — to the country at large, and it is very necessary that its proper regulation should be secured.

At the Cleveland meeting of the American Medical Association a committee was appointed to consider the regulation of emigration by Congress. This committee recently drew up a bill, which was presented to the national House of Representatives last month by General Slocum, and referred to the Committee on Commerce as an amendment to the Emigration Act of last year. The bill will be found in full on another page. Its passage and enforcement would reform many of the abuses which at present unquestionably exist, and tend to place the marine medical service — an extremely necessary department upon large passenger steamships — upon a positively and relatively useful and suitable footing, which at present is notoriously not the case.

The weak part of this bill is plainly the insufficient space prescribed for hospital accommodations. It may be that no more could be wrung from the cupidity of the owners of vessels, especially when it is at the same time demanded that the ship's surgeon, whose *maximum* pay has hitherto been only £9 or £10 per month and his position on a par with that of the chief steward or carpenter, should not only be provided with necessary assistants, but remunerated and treated as is the first officer or chief engineer,

It is said that competition between competing lines and dullness in trade and emigration have brought about a "cutting of rates" on ocean steamers similar to that with which we are familiar on our railroads. If so the present will prove both a difficult and desirable moment to introduce the proposed reforms.

We all recall the perfunctory and even fraudulent methods of complying with the laws for the vaccination of immigrants on some vessels of some steamship lines coming to this country, but when one becomes acquainted with the obstacles and want of facilities or support under which the surgeons of these vessels labored, a large part of the indignation, then only too justly aroused, should be transferred in many instances from the surgeon to his employer, the Steamship Company.

The great body of our citizens, whether those who travel or those who stay at home, have too direct and personal an interest in this reform of the medical service on ships to permit of its being dropped out of sight.

THE MEDICAL MAGNATES OF EDINBURGH.

During the earlier part of this century it was not uncommon for our medical graduates to finish their academic labors at the University of Edinburgh, which has just celebrated its tercentenary jubilee by conferring an honorary degree on Drs. Fordyce Barker and John S. Billings, beside a host of European celebrities. It is proper, therefore, to recall a few of the names that have made the University of Edinburgh illustrious in the annals of medicine and the kindred branches of learning. The University of Edinburgh, now one of the very largest in the world, and having more students than any other university except Paris, Berlin, and, perhaps, Vienna, was opened in 1583 as a town college created by and subject to the municipal council of the Scotch capital. The medical department of the University began in 1726, although a professor of botany had served since 1676, and Sir Robert Sibbard was not only appointed Professor of Physic in 1685, but received in the same year two unsalaried assistants. In 1706 Sibbard advertised in the *Edinburgh Courant* that he would teach natural history and the medical art *in privatis collegiis*, provided applicants could bring satisfactory testimonials as to their knowledge of Latin, Greek, mathematics, and philosophy. The Independent College of Surgeons, which had received a patent in 1695, caused a "Public Dissector of Anatomy" to be appointed in 1705.

But the medical department of the University owes its existence in part to the good sense of John Monro, a surgeon of King William's army, in part to four physicians — Sinclair, Rutherford, Plummer, and Innes — who, on their own petition, were appointed the Medical Faculty in 1726. The illustrious layman who helped nobly in this work was George Drummond, who founded the Royal Infirmary, opened in 1741. Meanwhile Alexander Monro had been appointed Professor of Anatomy in 1720, and may, perhaps, be called the father of the Edinburgh Medical School, because he made it famous by his Osteology, published in 1726, by his lectures, and by his son, who died in 1817 in the enjoyment of a European reputation

due in part to the folio volume of 1783, On the Structure and Functions of the Nervous System. The third Alexander Monro, likewise an anatomist, died in 1859, and had published his four volumes on the Anatomy of the Human Body in 1813. The next name, John Goodsir, brings us down to the present Professor of Anatomy, William Turner.

The Institutes of Medicine were taught first by Sinclair, who followed Boerhaave's Institutiones. Robert Whytt, professor from 1747 to 1766, was an advanced physiologist, but was surpassed by his successor, William Cullen, whose works are still quoted occasionally. James Gregory, an apostle of bloodletting, was succeeded by the two Duncans, of whom the elder taught from 1790 to 1819, and established a dispensary, an insane asylum, and the horticultural society of Edinburgh. His successors in office were, after his son, Alison, Thomson, John H. Bennett, and W. Rutherford, the present occupant of the chair.

The Practice of Physic has been taught by Rutherford, Gregory, Cullen, Home, Alison, and Thomas Laycock, who was partial to mental diseases. Midwifery was taught successively by Gibson (1726–1739), Robert Smith (1739–1756), Thomas Young (1756–1780), Alexander Hamilton (1780–1800), James Hamilton (1800–1839), Sir James Simpson (1840–1870), and his nephew, the present occupant. In 1847 Sir James Simpson professed himself less interested in having been appointed physician to the Queen than in having delivered a woman without pain while she was under the influence of ether. In the same year he discovered accidentally the modern use of chloroform, and soon after announced his discovery to the world, though some few persons thought it wrong to interfere with the curse of pain. Materia Medica used to be taught together with Botany, but was treated separately by Sir Robert Christison, who died two years ago, and was probably the most popular man ever connected with the University, among both teachers and students, beside being the head of the medical profession in Scotland. Christison is known to have finished his autobiography up to 1830.

The professorship of clinical surgery was held by James Russell from 1803 to 1833, and by James Syme from 1833 to 1869. Syme, it is needless to say, was the leading surgeon of his time and country, and one of the greatest of all Edinburgh professors. In 1818 he invented the waterproof "Mackintoshes," which the historian of the University, Sir Alexander Grant, thinks should be called "Symes." The same historian relates that Syme started a hospital of his own in the Minto House, where his assistant, Dr. John Brown, obtained the material for the famous tale, Rab and His Friends. Syme was succeeded by Joseph Lister, of antiseptic fame. Sir Charles Bell was Professor of Surgery from 1836 to 1842, Sir Wyville Thomson was Professor of Natural History from 1870 to 1882, and Joseph Black, Professor of Chemistry from 1766 to 1795, deserves a place by their side, as he was among the founders of quantitative chemistry. Finally it should be mentioned that Sir David Brewster was principal of the University from 1859 to 1868.

The medical department of the University of Edinburgh exceeds all others both as to professors and students, the latter numbering about 1800, or more than one half of all the students connected with the University. In 1826, the palmy year of the medical school, it had about 900 students; but it had only about 400 in 1840. The professors used to be appointed by the town council, with which they had many a brave fight. At present they are appointed by a board of seven curators. The medical department confers three degrees, — bachelors of medicine, masters in surgery, and doctors of medicine, the candidate for the latter alone being required to present a thesis on "some branch of medical knowledge, which he may have made a subject of study" after graduating as M. B. The Faculty is bound, also, to recognize extra-mural teaching over which the University has no control. In fact, the medical school of the University does not possess autonomy, and need not be consulted even in the appointment of new professors, unless those in authority so prefer.

EXTRAMURAL TEACHING IN EDINBURGH.

AT this time some details of the system of extramural teaching, which has largely contributed to make Edinburgh the medical centre it is, may prove interesting to many, especially as we chance to be in possession of such recently contributed by a well-informed correspondent.

In Edinburgh there is a large number of teachers, outnumbering even the professors, there being as many as two or three teachers of one subject, as midwifery, chemistry, or medicine, each lecturing independently of the other and in different rooms. These extramural lecturers or teachers set up for the most part under the auspices of the Royal College of Surgeons or the "School of Medicine" in Edinburgh. They may lecture without attendance on their lectures by a student being held as equivalent to attendance on the same class or subject intramurally or within the university. But it is almost the universal custom for each teacher to previously obtain the recognition of his status by the university, so that attendance on his lectures may count for the degree as equivalent to attendance on the same class within the university.

These lecturers for the most part give courses quite similar in character to those within the university, and therefore lecture, if one may so say, in opposition to the professors; and should a particular professor chance to be unpopular or a bad teacher, the extramural lecturer or lecturers may have a large class.

The fees charged by the extramural teachers are commonly one guinea less than the university fees (say £3 3s. instead of £4 4s.), but if it is desired by the student that his attendance on the extramural class should count for the university degree then he must pay to the extramural lecturer the same fee as he would have paid to the university professor, and the

fact of his having paid the larger fee must be noted on his card or certificate of attendance before it can be accepted by the university authorities. The Colleges of Physicians and Surgeons in Edinburgh grant licenses to practice, and it is largely in preparation for these that students attend the extramural lectures, and in such a case there is no restriction as to fee. Nor is there any restriction in the case of a university student if he has taken out the same class in the university and paid the usual fee, or has taken out the class at any other university.

Each extramural lecturer pays for his own rooms, provides his own apparatus, and holds all the fees he gets from his class. He is practically responsible to no one, but the university can always withdraw recognition of his lectures if they see a fit reason. When they grant recognition all they require is that the person has some status or standing in the subject on which he proposes to lecture, but recognition is often granted to comparatively young and inexperienced men; so much the worse for themselves if they are incompetent. A student for a university degree may only take out any four such extramural courses; all the others he must take in the university. This limits the effect of the opposition.

Besides these lecturers on the same subjects as university professors there are a few others who give courses on subjects not specially taught within the university, and not compulsory for the degree, as a course on diseases of the ear, eye, etc. Recently, however, a university lecturer on diseases of the eye has been appointed, as also one on insanity. These are the only two lecturers, not professors, holding their appointment direct from the university. In no case is the number attending the class limited. There are no small cliniques. Each of the clinical professors at the infirmary has a following of from twenty up to even eighty and one hundred. Men are drilled in the elements of practical diagnosis in groups of ten or twenty by the clinical tutor acting as assistant to the clinical professors.

The extramural teacher can lecture *when* and where he pleases, only he commonly finds it most convenient and profitable to lecture at the same hour as the professor of the same subject.

This system of extramural teachers is of great antiquity in Edinburgh, and has been found to supply a healthy stimulus to the university professors, many of whom came from the ranks of the extramural lecturers, especially in the practical subjects of medicine, surgery, and midwifery. A majority of the present professors were extramural lecturers before being appointed professors. The professor has always the advantage of endowment, better equipped and more commodious laboratories, and the chance of examining the student for his degree, which last induces men to stick to the university teachers.

In Glasgow a similar system has only recently been established, and there is now a very large number of extramural teachers there.

In Aberdeen the system or practice does not exist, and university professors are unopposed.

MEDICAL NOTES.

— Two more deaths from foot-ball are reported from England, both from injury to the spinal cord. In one case death was sudden; in the other the unfortunate young man lingered for four months in a hopeless state of paraplegia resulting from hæmorrhage into the cord.

— Mr. Lawson Tait recently read a paper on Relations of Ovulation to Menstruation before the Midland Medical Society, as we learn from the *Birmingham Medical Review*. He gave a historical sketch of the literature of the subject since 1843, the date of the publication of Dr. Ritchie's papers, and observed that although Ritchie's discoveries had been amply and frequently confirmed, the text-books still reiterated the mistaken view that menstruation was the equivalent of the œstrus or rut, and that it was due to the ovarian excitement of the ripened follicle. He next gave a series of observations derived from his surgical practice, in which it was shown that in forty-nine observations there was evidence of the concurrence of ovulation and menstruation in nine only, whereas in forty cases the evidence was either negatively (fifteen cases) or positively (twenty-five cases) against the ovulation theory of menstruation. It was therefore impossible to maintain a theory which was controverted by nearly eighty-two per cent. of evidence.

— The *London Practitioner* quotes a practice said to have been used for some time in the Milan Hospital for an aid to the diagnosis of fracture of the neck of the femur. The measure consists in exploring (whenever fracture of the neck of the femur is suspected) the short space between the trochanter and crest of the ilium. In place of considerable resistance, which is then produced in the sound limb through the tension of the tensor fasciæ latæ, there is found, when injury has occurred, a deep depression due evidently to the diminution of the tension of this muscle owing to the approximation of its points of attachment.

— A recent visitor to the venerable University of Pavia found among other relics of Scarpa, who is the special glory of that seat of learning, the head of the great anatomist with the soft parts entire preserved in a bottle. The fingers are also exhibited. Probably most such zealous devotees of science would be willing to occupy permanently a niche of a museum if they could thereby serve to illustrate any curious point of anatomy or of pathology. But it would seem more appropriate to most minds outside of relic-worshiping Italy, that if any remains of the old professor were to be made immortal, they should at least have combined a scientific with a personal value. His triangle would have been a more tasteful souvenir than his face.

— A curious pathological fact is related by M. Guillaume Chapus in a memoir, Sur les Médicins et la Médecine en Asie Centrale, which we find noticed in a French journal. One town of Turkestan, Kokane by name, is composed in great part of individuals afflicted either with goitre or cretinism. The traveler is struck with the appearance of the inhabitants, who

present all degrees of goitre from a slight fullness to enormous thyroid tumors. The peculiarity in the case consists in the fact that outside this one town goitre and cretinism are very rare. In Kokane the hygienic surroundings seem to be the most satisfactory. It is situated in a plain at an elevation of 1300 feet, and is abundantly supplied with pure water from a mountain stream. In 1878 the Russian troops occupied this town, and it was discovered that about a tenth part of the soldiers of the garrison became affected with goitre after a few months' stay. The tumors proved amenable to the external and subcutaneous use of iodine. It was considered prudent, however, to remove the garrison from Kokane, and another town of less pathological interest was selected as the political capital of the province.

— Pleuro-pneumonia has again caused alarm among cattle owners on Staten Island, and on the 10th of April four diseased cows were killed at Sailors' Snug Harbor. The authorities have quarantined the remainder of the herd where the disease appeared.

— A correspondent of one of our contemporaries, who gives painful evidence of being a scoffer, announces the discovery of a new germ which threatens us with a dangerous epidemic. He christens it the *bacillus lunaticus medicus*.

Correspondence.

PATHOLOGICAL CONDITIONS OF THE SKIN FOLLOWING THE INTERNAL USE OF BORAX.

MR. EDITOR, — Will you kindly allow me the use of your correspondence columns to request from any physician who may have observed squamous or other pathological conditions of the skin, following the internal administration of borax (whether for epilepsy or not), very brief notes of the cases for publication?

Treatises upon diseases of the skin do not appear to recognize such conditions, which have yet been observed in England by Gowers and also by other writers upon mental and nervous diseases, as well as here in Boston. Very truly yours,

EDWARD WIGGLESWORTH, M. D.

79 BOYLSTON STREET, *April* 19, 1884.

Miscellany.

DR. ALFRED STILLÉ ON THE VALUE OF ETHICAL CODES FOR PRACTITIONERS OF MEDICINE.

PROF. ALFRED STILLÉ delivered a valedictory address to the medical classes of the University of Pennsylvania on withdrawing from the chair of the Theory and Practice of Medicine, which is at once wise and graceful in an eminent degree.

We take the following extract, which we regret is all our space will permit, from the *Medical News* of April 19th. We think few dispassionate men can read it without giving an assent, however unwilling, to what Dr. Stillé says: —

It is sometimes asked why the medical profession alone should require a code of ethics for the regulation of its conduct. The question is not without the flavor of a sneer, and implies that there must be something peculiarly perverting in the science of medicine or corrupting in its practice which renders necessary so formal a statement of its moral duties. Let us consider the matter.

The moral government of mankind has never been intrusted to merely abstract propositions. The most ancient of moral codes, the Decalogue, maintains its authority unbroken by thousands of years. Their sum and substance are embodied in the two simple precepts of the founder of Christianity, and yet the former was expounded by Moses and his successors into an elaborate system of law, was adopted into Christianity, and thence by all the civilized nations of the world until it has interfused the legislation under which we live at the present day, and not the legislation only, but the usages of society in all ages. Wherever law reigned men who were similarly employed were drawn together into guilds and societies for the common benefit of their members, and in each statutes were enacted which enforced compliance with them by heavy penalties. Even among trades ethical rules existed, and when the learned professions were gathered into their respective colleges or faculties the privileges and rights of the members were counterbalanced by laws for the regulation of their conduct. The clergy alone were destitute of any specific ethical code, because they were held to be especially under the divine law from which all other codes emanated, and yet every religious community, of whatever denomination, possessed, and still possesses, special rules of conduct by which its members must be governed. The necessity of ethical codes arises from the fact, everywhere and always recognized, that either through lack of instruction, or through a defective or perverted moral sense, or through mere heedlessness, men do fail more or less to conform their conduct to justice and equity.

If men were habitually virtuous and just, unselfish and generous, if they could always see themselves as others see them, and judge their own motives and actions as strictly as they judge of other men's, then, indeed, there would be but little need for ethical or religious laws, for "they that are whole need not a physician." But law is nature's medicine for nature's defects and errors. Whoever imagines that he needs it not, that he possesses an inner light that will prevent his feet from straying into the paths of error, and enable him to decide justly in every conjuncture of life, is more to be wondered at for his boldness than admired for his modesty, for he lifts himself into a judgment seat where even Solomon did not dare to sit.

I have said that the relations of a physician to his brethren and to society differ widely from those of other professional men, and, indeed, of all other men whatever. The emulation and rivalry of clergymen and lawyers are, for the most part, displayed before the eyes of the world, so that there is no special opportunity for an evil-minded man of either profession to backbite or malign his brethren. Moreover, he knows that if he offends in this manner the court may affix a stigma to his name, or the religious body or the superior upon whom he depends may ruin him by an ecclesiastical condemnation. In the medical profession there is no tribunal which is under such imperative obligations to act or enforce its decisions so rigidly. Hence one necessity of a code of ethics. But another, already implied, is even more cogent. The physician is the only human being who is habitually admitted behind

the scenes of life's stage. He is the depository of secrets to which even a confessor's ear is a stranger, secrets on which station, honor, and life itself may depend, and even when not so burdened he is more than any one else the confidant and friend of those whose diseases he has healed. He is often the guardian of families that put their trust in him. Is it any wonder, therefore, that he should be jealous of the intrusion of a rival, or even of a friend, upon his preserves, and that, the evil of human nature aiding, the rival should endeavor to supplant him, and that thereout coldness, estrangement, animosity, evil-speaking, and ill-treatment should arise? Or is it surprising that the very confidential relations of a physician to his patient should expose him to the temptation to do wrong, and that he should, therefore, be warned by written laws of the danger he incurs?

These are the grounds out of which the ethical principles of the British and the code of the American medical profession grew, and which inspired the works of French and German writers on the same subject. They are the principles of honor, morality, and whatever is best in modern civilization, and, therefore, should be had in respect by all. It is a sign of decadence in the American social and medical systems that such laws are treated as obsolete or superfluous, and sneered at as fit only for children in leading-strings. Let me, as the parting counsel of one not without experience of life, adjure you to hold fast to this rock of safety, and, far from aiding to abrogate it, to strengthen and perpetuate it by every means in your power.

Impatience of authority and restraint has, perhaps, a deeper source than I have yet indicated. Its most conspicuous and violent outbreak occurred in France a century ago, and for a time covered the country with ruins steeped in blood. In our own day, the rebellion against law, if less sanguinary and destructive, is not less vehement, and is far more extended. Its name is Nihilism, and its creed is the denial of whatever has been known as religion, a hatred of all the virtues that are the fruit of faith, and a contempt of the obligations imposed by law. It tends to rob man of trust in whatever has been loved or respected in religion, in law, in the love and authority of parents, in the affection and obedience of children, in virtue, in duty, in honor, and in the established order of things that links the present to the past and to the future, making it the offspring of the one and the parent of the other.

If it were possible for this egoistic materialism to endure and prevail, the winter of humanity would indeed be near at hand, in which all signs of life, all progress and development, all beauty and nobility would be frozen out of it, and mankind would be reduced to a lower moral level than the beasts of the field. A world without faith! A world without love! As easy were it to conceive of a world without light or heat. In such a chaos what would become of all those institutions that have been established, perfected, and reverenced by advancing civilization? Conceive, for a moment, a community where no song of bell nor inward voice called to worship; where justice had become deaf as well as blind, because every man claimed to be a law unto himself; where there was no balm to soothe, no physician to cure, no right of property, no sacredness of person, where, in a word, mankind had lost whatever has hitherto distinguished humanity. If you can imagine such a herd of human beings — for it will no longer be a society or a community — you may behold in it a picture of the one that will assuredly arise if these nihilistic doctrines, this worship of self, this scorn of faith, this contempt of the past and exaltation of the present should prevail.

Let me plead with you to shun these poisonous principles which tend to the destruction of all that has been held noblest and best by the wise and good of every age; principles which put farther asunder the nations, communities, and individuals whom the physical improvements of the age should bind together and at last fuse into one. Faith is the parent and preserver of all good works. Unbelief, like Saturn, devours its own children. Faith is to man's nature what sunlight is to the world, clothing it with beauty and life; while unbelief is like the moon, in which the sun's rays create neither motion nor color, but fall forever upon its lifeless orb. Without faith, man's ambition is but narrow selfishness, contemptuous of the historic past on which it is compelled to build, and careless of what evil germs it may plant to be developed in the future. The higher a man rises in his humanity, the more clearly does he feel himself to be a link between the past and the future; the more fully recognize that what he has received that also must he transmit, increased, perfected, and consecrated by that spirit of love for humanity without which "good gifts wax poor."

ETHER ADMINISTERED BY THE RECTUM.

A NOTE on etherization per rectum, which, so far as we know, is quite a novel device, is published by Dr. Molière, senior surgeon of the Hôtel Dieu at Lyons, in *Lyon Médical* (March 30th). The idea was first suggested to the writer by Dr. Yverson, of Copenhagen, who, at the conclusion of a visit to the Lyons hospital, asked what anæsthetic was used there. To the answer, ether, he asked how it was administered, by mouth or by rectum. This question was the cause of the experiments detailed. The first operation in which this method was used was upon a young girl of twenty, and was for the removal of a tumor in the parotid region. The ether was insufflated to the bowel by an atomizer, giving a mixture of air and ether. No sign of anæsthesia appeared for ten minutes. The patient then declared she felt a strong taste of ether in the mouth, which was confirmed by the odor of her breath. She then began to sob and to talk incoherently. A few drops of ether were then held before the nose, and she almost instantly fell into a deep sleep. The operation was performed without the inconvenience of a respirator. On the removal of the rectal canula at the close of the operation the patient awaked. The quantity of ether absorbed had been very small.

In subsequent cases a rubber tube of the size of the finger was introduced into the rectum and connected with a flask of ether which was plunged into a vessel of water at 50° C. The ether boiled, and its vapor passed into the bowel. In the second of the cases described, in five minutes the signs of ether intoxication were present, but as the patient then got up the anæsthesia was completed by inhalation. In the third case, where a finger was to be removed, perfect anæsthesia was secured by the rectal administration of the drug. Auscultation revealed the passage of bubbles of ether in the intestine, and the odor of the drug was distinct in

the breath. At the most ten grammes of ether were used. No nausea or vomiting occurred.

As a result of the experience of Dr. Molière he concludes that this method of administration is likely to prove of great service. It suppresses, he claims, the period of excitement (this was especially noted in the case of a hard drinker, where experience teaches us usually to expect considerable excitement). It allows the quantity taken to be accurately measured, and reduces the amount necessary to a small quantity. It leaves the surgeon untrammeled by sponges and inhalers when operations are to be done on the face or mouth. It removes the disagreeable effects of inhaling the vapor. Further experiences of the method are promised us, and they will be awaited with interest.

PROBABLE TRANSFIXION OF THE HEART, WITH RECOVERY.

IN the *Edinburgh Medical Journal* (March, 1884) a case is reported of a woman with suicidal impulse, confined in an asylum, who was observed, just after getting into bed one night, to have become suddenly and violently ill, and medical aid was summoned at once. On its arrival she was found to be quite unconscious, very pale, skin cold and clammy, pupils widely dilated, but there was no conjugate deviation present; the features were drawn and altered, and the head was rolled rhythmically from side to side, patient moaning slightly at times. The radial pulse on the right side was very weak, that on the left almost imperceptible; rate 78 per minute. The left arm and leg were quite paralyzed so far as could be made out. The right arm was lifted and let fall feebly and aimlessly now and then. She had vomited a little, but no deleterious substance could be detected in the rejected matter by the rough examination possible at the time.

On palpation over the præcordia the cause of this rather puzzling condition was discovered. A knob about the size of a large pea was felt adhering to the chest wall, in the situation of the apex beat, and this proved to be the head of a large steel shawl-pin, about three and three eighths inches long, which the patient had succeeded in secreting, unobserved by the attendant in charge, and which she had thrust right into the chest, at the situation mentioned above, the part imbedded being directed slightly upwards and inwards, and measuring about two and three fourths inches. It was at once removed, and stimulants administered, and almost immediately the heart's action began to gain in force. The pulse became stronger and steadier, and consciousness slowly and gradually returned. For some time there was very urgent dyspnœa, and patient complained much of pain in the præcordia, but these unfavorable symptoms diminished as time went on, and after an hour had passed she was much better; the paralysis of the left side had disappeared; the pulse was steady, and of fair strength, rate 108 per minute, and she was quite conscious of what transpired around her. Four hours after the occurrence she was sick again, and vomited a little, but this soon passed off, and she fell asleep, and slept at intervals during the rest of the night, stimulants being given frequently in small doses. On the following day she complained of some pain at the site of puncture and of headache, but was otherwise pretty well, and her recovery after this proceeded without interruption.

The writer believes, from the point of puncture and the direction of the needle, that the heart was wounded near its apex. Reference is made to a similar case in Holmes's Surgery, and to another author who describes a tigress which lived for some time with seven lead bullets in her heart. The practical applications of these facts to the operation of cardiacentesis are of interest.

CARRIAGE OF PASSENGERS BY SEA.

IN the United States House of Representatives, March 24, 1884, Mr. Slocum introduced the following bill: —

A BILL TO REGULATE THE CARRIAGE OF PASSENGERS BY SEA.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in every steamship or other vessel carrying or bringing passengers other than cabin passengers to the United States there shall be properly constructed and separated from other parts of the vessel two compartments or spaces to be used exclusively as hospitals, the one for the men and the other for the women, such hospitals to be located on the main deck or the deck immediately below it, and never on any lower deck, and to be in no case less in size than the proportion of eighteen clear superficial square feet for every fifty such passengers and crew; and such hospitals shall be supplied with proper beds, bedding, and utensils, and kept so supplied throughout the voyage.

SEC. 2. That every steamship or other vessel carrying or bringing passengers other than cabin passengers exceeding, with the crew, fifty in number, and less than six hundred, shall be required to carry a duly qualified, competent, and regularly licensed surgeon or medical practitioner, and where the number of such passengers and crew is over six hundred a junior or assistant surgeon or medical practitioner in addition, which surgeons or medical practitioners, junior and senior, shall be rated as such on the ship's articles, and shall be provided with surgical instruments, medical comforts, and medicines proper and necessary for diseases and injuries incident to a sea-voyage, and for the proper medical treatment of such passengers and crew during the voyage, and with such articles of food and nourishment as may be proper and necessary for preserving the health of infants and young children; and the services of such surgeons or medical practitioners shall be promptly given without fee in every case of sickness, disease, or accident to any of the passengers or crew, or to any infant or young child of any such passenger who may require their services; and the medical officer, where there is but one, and the senior where there are two, shall also be required to perform the duties of sanitary officers, to make daily inspections of all inhabitable portions of the vessel, and daily reports thereon in writing to the master of the steamship or passenger vessel, together with such suggestions and recommendations as in his judgment may be necessary to the preservation of health on board. He shall also exercise constant vigilance in regard to the condition of the provisions and water, and promptly report to the master anything which may appear to him to be deleterious to the health of any person on board.

SEC. 3. That for the proper exercise of these functions and the maintenance of the respect to which such medical and sanitary officers are entitled, they shall be provided with a steward or apothecary competent to dispense medicines under their direction and for their special service; and their tenure of office, remuneration, and right to suitable quarters, subsistence, and attendance shall be upon the same basis as and coördinate with the purser, first officer, and chief engineer of the vessel on which they serve.

SEC. 4. That for a violation of either of these provisions, or the disregard of the recommendations made in writing by the medical and sanitary officers as herein provided, the company to which the steamship or other passenger vessel belongs shall be liable to a penalty not exceeding two hundred and fifty dollars in every case.

ERRATA. — On page 157 of our present volume, number of February 14th, it should have been mentioned that the chamois leather bag devised by Dr. J. C. Warren as a substitute for strapping the testicle and for the treatment of hydrocele, of which a cut was given, could be obtained from Messrs. Leach & Greene, of Boston.

The JOURNAL in its issue for April 10th, page 358, inadvertently spoke of an address to the Massachusetts Legislature on Adulterated Drugs as having been signed by all the living ex-

presidents of the Massachusetts Medical Society. Besides the signers of this document two of the former presidents of the State Society are still in the enjoyment of life and the esteem of their several communities, — Dr. Samuel A. Fisk, of Northampton, president from 1870 to 1872, and Dr. William Cogswell, of Bradford, who served from 1876 to 1878.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 12, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	625	252	14.40	18.56	1.76	6.08	1.12
Philadelphia	927,995	404	158	12.25	14.25	1.75	4.50	1.25
Brooklyn	644,526	230	67	6.88	20.93	.86	2.15	1.72
Chicago	632,100	236	129	18.06	10.75	6.30	2.10	2.10
Boston	423,800	138	37	16.79	16.06	2.19	5.11	3.65
Baltimore	408,520	128	48	14.60	17.94	2.34	2.34	.73
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	116	30	12.04	19.78	2.58	2.58	2.58
New Orleans	234,000	122	45	22.14	11.48	2.46	—	.82
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	105	35	9.52	19.00	.95	2.85	3.80
Pittsburg	180,000	75	37	7.98	9.31	—	3.99	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	14	2	7.14	21.42	—	7.14	—
Nashville	54,400	21	6	9.52	9.52	—	—	—
Charleston	52,286	46	15	14.98	12.84	4.28	—	—
Lowell	71,447	34	8	14.70	32.34	5.88	—	—
Worcester	69,442	24	11	12.48	16.64	—	4.16	4.16
Fall River	62,674	16	5	6.25	12.50	—	6.25	—
Cambridge	60,995	15	0	—	40.00	—	—	—
Lawrence	45,516	8	1	12.50	12.50	—	—	—
Lynn	44,895	12	3	—	33.33	—	—	—
Springfield	38,090	10	4	10.00	20.00	—	10.00	—
Somerville	31,350	8	0	12.50	25.00	—	—	—
Holyoke	30,515	7	3	28.56	—	—	14.28	—
New Bedford	30,144	14	3	7.14	14.28	—	7.14	—
Salem	29,503	5	1	—	20.00	—	—	—
Chelsea	24,547	10	2	10.00	—	10.00	—	—
Taunton	22,693	4	0	2.50	—	—	—	2.50
Gloucester	21,400	6	2	—	16.66	—	—	—
Haverhill	20,905	9	4	11.11	11.11	—	—	11.11
Newton	19,421	6	2	—	16.66	—	—	—
Brockton	18,323	3	2	33.33	23.33	33.33	—	—
Malden	15,273	8	3	—	—	—	—	—
Newburyport	13,947	5	1	—	—	—	—	—
Fitchburg	13,433	7	4	14.28	14.28	—	—	—
Eighty-one Massachusetts towns	472,743	76	9	7.92	9.24	1.32	1.32	—

Deaths reported 2547 (no reports from St. Louis, Buffalo, Milwaukee, and Providence): under five years of age, 920: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 334, consumption 426, lung diseases 321, diphtheria and croup 93, diarrhœal diseases 55, scarlet fever 38, measles 33, typhoid fever 33, whooping-cough 19, small-pox 14, cerebro-spinal meningitis 14, malarial fevers 13, erysipelas 11, puerperal fever 10, typhus fever one. From *measles*, New York 15, Baltimore eight, New Orleans four, Chicago three, Philadelphia two, Brooklyn one. From *typhoid fever*, Philadelphia nine, Boston four, Charleston three, Chicago, Baltimore, Cincinnati, and Pittsburg two each, New York, Brooklyn, District of Columbia, Nashville, Lowell, Lawrence, Acton, Chicopee, Spencer, and Marblehead one each. From *whooping-cough*, New York six, Chicago five, Baltimore two, Philadelphia, Brooklyn, Cincinnati, and Pittsburg one each. From *small-pox*, New Orleans 13, Nashville one. From *cerebro-spinal meningitis*, New York five, Philadelphia three, Chicago, Boston, New Orleans, Lowell, Worcester, and Quincy one each. From *malarial fevers*, New York four, New Orleans three, Chicago and Charleston two each, Boston and Cincinnati one each. From *erysipelas* Chicago three, New York, Philadelphia, Brooklyn, Boston, Baltimore, Cincinnati, New Orleans, and District of Columbia one each. From *puerperal fever*, Philadelphia three, Chicago two, New York, Brooklyn, Boston, Lowell, and Holyoke one each. From *typhus fever*, New York one.

Two cases of small-pox were reported in Cincinnati; scarlet fever 43, diphtheria 14, and typhoid fever two, in Boston.

In 100 cities and towns of Massachusetts, with an estimated population of 1,394,472 (estimated population of the State 1,955,104), the total death-rate for the week was 16.00 against 16.77 and 18.21 for the previous two weeks.

In the 28 great towns of England and Wales, with an estimated population of 8,762,354, for the week ending March 29th, the death-rate was 20.8. Deaths reported 3495: acute diseases of the respiratory organs (London) 359, whooping-cough 154, measles 135, scarlet fever 73, fever 41, diphtheria 20, small-pox (London 11, Liverpool and Sunderland two each, Birmingham and Newcastle one each) 17. The death-rates ranged from 12.5 in Derby to 30.7 in Halifax; Bradford 15.9; Birkenhead 17.8; Leicester 18.9; Sunderland 19.1; Sheffield 19.8; Nottingham 20.3; London 20.4; Birmingham 20.8; Leeds 21.5; Liverpool 22.2; Manchester 27.1. In Edinburgh 21.6; Glasgow 27.4; Dublin 27.2.

For the week ending March 29th, in the Swiss towns, there were 54 deaths from consumption, lung diseases 31, typhoid fever 37, diarrhœal diseases 11, diphtheria and croup 11, whooping-cough eight, scarlet fever one, erysipelas one. The death-rates were, at Geneva 31.6; Zurich 25.6; Basle 16.3; Berne 27.8.

The meteorological record for the week ending April 12th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
April, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 6	29.595	40	52	32	85	62	84	77	NW	W	NW	13	9	11	O	C	F	—	—
Mon., 7	29.713	42	48	35	87	73	77	79	NW	NW	NW	7	5	8	T	O	O	—	—
Tues., 8	29.918	39	44	35	88	90	99	92	NW	E	E	7	9	5	O	O	O	—	—
Wed., 9	29.679	36	38	33	100	100	100	100	E	NE	NE	10	19	19	O	R	R	—	—
Thurs., 10	29.505	38	41	33	100	89	94	94	N	NW	NW	13	16	3	R	R	O	—	—
Fri., 11	29.866	41	48	36	86	90	78	85	NW	SE	NW	6	6	7	F	O	C	—	—
Sat., 12	30.030	45	57	35	78	48	67	61	W	W	W	8	12	6	C	O	C	—	—
Mean, the Week.	29.758	41	47	34				84										51.10	.62

[1] O., cloudy; C., clear; F., fair; G., fog; H., sleet; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM APRIL 12, 1884, TO APRIL 18, 1884.

BAILY, JOSEPH C, major and surgeon. Leave of absence extended three months. By paragraph 8, S. O. 83, A. G. O., April 10, 1884.

NEWTON, R. C., first lieutenant and assistant surgeon. Relieved from duty at Fort Sill, Indian Territory, and ordered to Fort Elliott, Texas, for duty. Paragraph 1, S. O. 77, headquarters Department of the Missouri, April 14, 1884.

PILCHER, JAMES E., first lieutenant and assistant surgeon. Assigned to duty at Camp Poplar River, Montana. Paragraph 2, S. O. 37, headquarters Department of Dakota, April 7, 1884.

CHAPIN, ALONZO R., first lieutenant and assistant surgeon. Relieved from duty at Fort Douglas, Utah, and ordered to Fort Laramie, Wyoming, for duty. Paragraph 2, S. O. 33, headquarters Department of the Platte, April 15, 1884.

WALES, PHILIP G., first lieutenant and assistant surgeon. Ordered to report to the commanding general, Department of the Columbia, for assignment to duty. Paragraph 11, S. O. 84, A. G. O., April 11, 1884.

LIST OF OFFICIAL CHANGES IN STATIONS OF MEDICAL OFFICERS UNITED STATES NAVY FOR WEEK ENDING APRIL 19, 1884.

WALES, P. S., medical director, to continue on duty as member of Ration Board.

WELLS, H. M., surgeon, to special duty at Hot Springs, Ark.

PECK, GEORGE, medical director, ordered as President of Board of Medical Officers detailed for special duty at Coaster's Island, near Newport, R. I.

GORGAS, A. C., medical director, WISE, I. C., surgeon, members of above Board.

NELSON, H. C., medical inspector, detached from Navy Yard, Washington, and placed on waiting orders.

MCMURTRIE, D., surgeon, ordered to duty at Navy Yard, Washington.

SUFFOLK DISTRICT MEDICAL SOCIETY. SPECIAL MEETING. — The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, April 30th, at 7.45 o'clock. Dr. H. J. Barnes will read a paper on Sewage Systems, and the Epuration of Sewage by Irrigation and Agriculture, with a description of this method of disposal of the sewage of cities as illustrated in Berlin, Paris, Danzig, Breslau, and other large towns.

ALBERT N. BLODGETT, M. D., *Secretary.*
ROBERT T. EDES, *Chairman.*

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA holds its thirty-fifth annual session at Philadelphia, May 14, 15, and 16, 1884. Sessions from ten A. M. to five P. M., with intermission one P. M. to two P. M., at Annex to Union League, Broad Street below Chestnut. (Entrance on Moravian Street above Broad.)

APPOINTMENTS. — Dr. John H. McCollom has been reappointed City Physician of the City of Boston, and Dr. Arthur G. Griffin Port Physician for one year from the first Monday in May. The renomination by the Mayor of Dr. S. H. Durgin as member of the Boston Board of Health not having been confirmed by the Common Council Dr. Durgin retains office under the rules until an appointment is made.

Drs. W. W. Gannett and F. B. Harrington have been appointed Physicians to Out-Patients at the Massachusetts General Hospital.

Dr. Robert T. Edes has been nominated by the Medical Faculty of Harvard University to the chair of Clinical Medicine rendered vacant by the death of Dr. Calvin Ellis.

BOOKS AND PAMPHLETS RECEIVED. — Drugs and Medicines of North America. A Quarterly devoted to the Historical and Scientific Discussion of the Botany, Pharmacy, Chemistry, and Therapeutics of the Medicinal Plants of North America, etc. J. U. Lloyd. C. G. Lloyd, Cincinnati. 1884. Vol. I. No. 1.

Annual Report of the Librarian of Congress, exhibiting the Progress of the Library during the Year 1883. Washington. 1884.

A Comparison of Total and Manifest Hypermetropia as determined by the Prisoptometer, with and without the Use of Mydriatics. By H. Culbertson, M. D., Assistant Surgeon U. S. A. (retired). (Reprint.) 1884.

Seventieth Annual Report of the Trustees of the Massachusetts General Hospital and McLean Asylum, 1883. Boston. 1884.

Aneurism of the Femoral Artery and a Knife Wound of the Intestines. By W. O. Roberts, M. D. (Reprint.) Louisville, Ky. 1884.

Neurological Specialism. Presidential Address delivered at the Annual Meeting of the New York Neurological Society May 1, 1883. By W. J. Morton, M. D., New York. (Reprint.) 1883.

Transactions of the Rhode Island Medical Society. Vol. III. Part I. 1883. Providence. 1884.

Dictionnaire Annuel des Progrès des Sciences et Institutions Médicales. Par M. P. Garnier. Dix Neuvième Année, 1883. Paris: Germer Baillière et Cie. 1884.

Annuaire de Thérapeutique de Matière médicale de Pharmacie et d'Hygiène pour 1884 contenant le résumé des travaux thérapeutiques et hygiéniques publiés en 1883, etc. Par A. Bouchardat et par J. Bouchardat. 44e Année. Paris: Ancienne Libraire Germer Baillière et Cie. Félix Arean, Editeur.

Twelfth Annual Announcement of the American Medical College of St. Louis, 1884-85.

Seventeenth Annual Report of the Directors of the Massachusetts Infant Asylum. Presented to the Corporation at the Annual Meeting, April 8, 1884. Boston. 1884.

Peroxide of Hydrogen in Suppurative Conjunctivitis and Mastoid Abscesses, with a Report of two Cases. By A. E. Prince, M. D., of Jacksonville, Ill. (Reprint.) St. Louis, Mo. 1884.

Original Articles.

TYPHLITIS AND PERITYPHLITIS.[1]

BY LEONARD WHEELER, M. D., WORCESTER, MASS.

I AM happy to be able to say that Hippocrates knew nothing about this matter of pericæcal abscess, nor did any of his successors for many centuries; happy because it is pleasant to come upon new ground now and then, and not be always reminded that we are merely recovering what shiftless intervening ancestors have forgotten. This subject we have somewhat cosily to ourselves, and all confined to the last half century.

French surgeons in 1825 to 1835 began to talk scientifically of inflammations in the right iliac fossa, but Dupuytren and his contemporaries failed to connect them with their commonest origin in disease of cæcum and appendix. A true understanding of the origin and course of these inflammations was first reached by Dr. Burne, of London, who, in 1836 and 1838, published two papers in vols. xx. and xxii. of the Medico-Chirurgical Transactions. In 1844 a model article on the subject was published in Copland's Dictionary of Medicine.

The methodical diagnosis and scientific surgical treatment of *pericæcal abscess* dates no further back than the prime of a man still living, Dr. Willard Parker, who, in 1867, published in the *New York Record* a paper upon the subject, in which he advocates free incision, even though there be no fluctuation, if the disease has existed over five days, and there be a reasonable suspicion from the symptoms of the case that pus has formed. Dr. Parker had, indeed, been anticipated by Mr. Henry Hancock, of London, who, in 1848, reported a case of perityphlitic abscess, and reasoned in much the same way in regard to treatment. The article was reprinted in the *American Journal of Medical Science*, but it was the report of only one case; it failed to establish any principle, and was forgotten. It was almost twenty years before Dr. Parker reached anew and independently the same point, and "employed successfully a method of treatment which may be said to have disarmed this disease of its terrors, and changed its issue from one almost invariably fatal to the reverse." This expression, which I have quoted from Dr. Gurdon Buck, is rather extravagant, for even before Dr. Parker's method came into use the fatality was probably not above fifty per cent. The next excellent paper was by Dr. Gurdon Buck, in the Transactions of the New York Academy of Medicine, 1874. He tabulates thirteen cases of operation, all successful. This paper was reprinted in 1876 along with two others by the same author in a pamphlet, to which was given the general title Abscesses in the Lower Abdominal Cavity and its Parietes. He dwells upon the anatomical arrangement of the fasciæ, which determine the direction of the migration of purulent matter in this region. The whole pamphlet is a valuable addition to the literature of the subject. In 1880 Dr. H. B. Sands published a paper in Annals of the Anatomical and Surgical Society of Brooklyn. He analyzes twenty-six cases, eleven of operation, of which one died. One other paper deserves mention as contributing to the development of the surgical treatment of these forms of abscess, namely, one by Dr. R. F. Noyes, of Providence, published in the Transactions of the Rhode Island Medical Society, 1882. Dr. Noyes tabulates one hundred cases of operation. The mortality was fifteen per cent.

Text-books are only just now beginning to incorporate the results of these studies. It is only in the very latest editions that a satisfactory treatment of the subject is found, such as Packard's Edition of Holmes, 1881, and the last edition of Gross, 1882. Dr. Sands, writing in 1880, says: "What is known about (perityphlitis) has not yet been embodied in the standard surgical text-books, but remains scattered among the pages of current medical literature." As to books on the practice of medicine, many of them, especially Ziemssen and Quain's Dictionary, contain excellent medical articles, but they do not indicate with sufficient clearness and emphasis where surgery should step in.

The following case lately turned my attention to the subject, and led me to select it for your discussion this evening: —

Mrs. H., aged thirty, mother of one child eight years old, called at my office January 8, 1883, complaining of a pain in right lower abdomen. In the summer of 1881 she had had a good deal of general abdominal discomfort and pain associated with constipation, and had slight and brief attacks of similar trouble since. More recently she had been under my care for a prolapsed and inflamed right ovary, and I at first associated the pain complained of with this. I made a careful examination, external and internal, and could find nothing to account for the pain. After a week she came again, and I found a small tumor in the right groin, which I thought an inflamed inguinal gland. It was small, superficial, not freely movable, and only slightly tender. There was pain in the inguinal region, but no considerable costiveness, no nausea, no marked fever, no deep tumor or extreme sensitiveness, and no fluctuation in the superficial tumor. February 1st, end of three weeks, during which the patient had been about until the last few days, fluctuation was distinct, skin becoming red, percussion flat. I opened the abscess by a small incision. An ounce of foul-smelling pus escaped, and a few bubbles of gas. Meanwhile, though the appetite had failed, there was no great pain, the temperature was only slightly raised, there had been no rigor, the bowels were only moderately constipated, not unusually so. There was nothing to excite any unusual apprehension except the bubbles of air, which made an intestinal perforation probable. February 13th the whole abscess cavity outside the abdominal muscles was laid open, and an opening through the fascia carefully sought with a probe, but none found. March 1st the spindle-formed cells of orange pulp (intestinal contents) were noticed in the discharge from the wound. April 13th a search with the probe still failed to discover the abdominal opening until the granulations in the bottom of the wound were scraped clean away, when an opening just about large enough to pass a silver probe was found above the middle of Poupart's ligament. Through this a somewhat devious sinus led to the cavity of the intestine one and one half or two inches away. A short time after this, air, and later fæcal matter, in small amount, began to pass with the urine. Later still a small amount of urine came through the wound. The amount of fæces or urine passing by the wound was never large enough to give much trouble, but the appetite failed entirely, the patient gradually wasted, and died of exhaustion ten months after the beginning of the trouble.

[1] Read before the Worcester Society for Medical Improvement.

The autopsy showed firm adhesion of the cæcum to the abdominal wall and iliac fossa by a thick mass of hard tissue. There were no adhesions to other parts of the intestine. A crooked sinus, one inch in length, passed from the abdominal wall through the thick mass of hard tissue mentioned above as binding the cæcum to the abdominal wall, and entered the cæcum through an opening one fourth inch in diameter. From this sinus a branch about two inches long communicated with the bladder. The colon just above the perforation was much contracted and thickened, while the mucous surface both above and below was studded with numerous small ulcers.

My explanation of the course of the disease in this case is that it began long before in an affection of the mucous coat of the cæcum, resulting in ulceration; adhesions were formed as the disease approached the serous surface. Then the connective tissue gradually thickened as the disease advanced, and hence the tough mass in which the cæcum was found imbedded, and by which it was firmly bound to the abdominal wall and iliac fossa. A passage was slowly made by ulceration through the abdominal fascia before any extensive accumulation of pus was made behind it. The sinus leading to the bladder must have been formed in part, if not wholly, after the external opening was made.

A little consideration of the anatomy of the parts involved helps to an understanding of the varied course of inflammations of this locality. The cæcum, two and one half inches long by two and one half inches wide, lies, with the appendix vermiformis and the beginning of the ascending colon, in the right iliac fossa, separated from the iliac bone on one side by the iliacus muscle, and from the vertebræ on the other by the psoas magnus. The appendix, from two to six inches long, is usually found at the end of the cæcum, interiorly and posteriorly, and curling upward and inward. The appendix is almost entirely covered with peritonæum. The cæcum and colon are covered anteriorly by peritonæum, but posteriorly are imbedded in connective tissue, which intervenes between the bowel and the iliac fascia. Now this iliac fascia is of the utmost importance, for, like all fasciæ, it serves to guide the migration of pus whether the abscess be above or under it. It is attached externally to the crest of the ilium as far forward as the anterior superior spinous process, and interiorly to the brim of the true pelvis. Below it helps to form the outer half of Poupart's ligament, and continues down the thigh as the fascia lata. Above it extends far upward over the psoas muscle quite to its attachments. The crural arch, which is spanned by Poupart's ligament, is divided into two parts by a prolongation downward to the bone, inserted into the ilio-pectineal eminence, and continued downward in the thigh as an intermuscular septum. The outer part of the arch gives passage to the muscles, the inner to the vessels.

An abscess may be formed over or under this fascia. If under, the pus will find its way along the psoas and iliacus muscles, and under the *outer* half of Poupart's ligament, and may best be evacuated by an incision of the fascia lata of the thigh. If the pus forms above the fascia iliaca, as in the diseases which we are considering, the pus creeps along between the fascia and the peritonæum, and is best evacuated by an incision through the abdominal fascia, and as soon as may be, lest in seeking its most eligible route it break through into the peritoneal cavity or bowel. If allowed to continue its course in the most eligible route, and it does not break through into the peritoneal cavity, owing to protective adhesions and thickening, it follows the iliac vessels, and emerges under the *inner* end of the crural arch, and into the inner side of the thigh. Bartholow states that it takes this direction in two thirds of the cases.

I have included typhlitis in my subject only because perityphlitis is inseparable from it. Any inflammation of the cæcum or appendix may result in an inflammation of the surrounding tissue, may eventuate in abscess. Though most cases of typhlitis get well without a perityphlitis, and many a perityphlitis advances no farther than a phlegmon and ends in resolution.

The most common cause of inflammation beginning in cæcum or appendix is a mechanical one. Some foreign body or a mass of hardened fæces remains long enough to irritate and inflame the mucous membrane. A mass of fæces impacted in the cæcum and colon may contain matters swallowed months before. A great variety of foreign substances have been reported in different cases as causes of ulceration or as the foundation of concretions, such as kernels of various grains, the stones or seeds of fruits, beans, a piece of bone or cartilage, a pin, nail, bristle, shot, gall-stones, inspissated mucus, a mass of ascarides' eggs, a bundle of lumbricoid worms. An idiopathic catarrh may occur here, as in other mucous tracts. Disease may arise from injury or follow certain constitutional diseases, as typhoid or tuberculosis. Disease of the cæcal mucous membrane arising from either of these causes may be slight and transient or severe in any degree, though probably not fatal except indirectly by perforation of the bowel. The lighter, simply catarrhal cases of typhlitis are more common in children. The severe cases of ulcerative inflammation are more apt to be met with in adult life, and it is an important fact in connection with them that they are very liable to relapse. Cases are recorded by more than one author of a dozen relapses in the same individual.

I shall say a few words in regard to symptoms, diagnosis, prognosis, and treatment, not attempting to speak fully of either.

Symptoms. An attack of typhlitis is more common in young males. It is usually abrupt, though often preceded by an irregularity of the bowels. At the time of the attack the bowels are usually constipated. Pain and tenderness are complained of in the right inguinal region, there is slight fever and probably vomiting, and the attack may pass off with no greater trouble than this. Such cases are considered common, and are often repeated in the same individual. I have never come across one, however, or if I have, have not recognized it. The attack may be something more severe than this, a tumor be demonstrable, the right leg drawn up, and the decubitus on the right side in order to diminish pressure on the diseased part. The great majority of *such* cases even recover without the formation of abscess or development of peritonitis after a duration of from three or four to ten or twelve days, though an induration may remain for months.

Perityphlitis by no means necessarily implies abscess. The symptoms of the most formidable cases are similar to the above except in degree until perforation occurs or an abscess forms. A perforation into the peritoneal cavity makes itself very promptly known by the symptoms of acute general peritonitis. A perforation into the post-cæcal cellular tissue is not so mani-

fest, nor is it easy to know when suppuration begins.

Diagnosis. The number of diseases with which typhlitis and perityphlitis may be confused is large, but in most cases it only seems necessary to have the disease in mind in order to discover it. Mr. Maunder, of London, was called to tap an ovarian cyst, and found a cæcal abscess. Dr. Fordyce Barker narrates two cases, both seen by eminent counsel. The first patient was the wife of a physician, who proved to have a pelvic hæmatocele, although the diagnosis had been perforation of the appendix. The second was daughter of a physician, who proved to have a perforation of the appendix when the diagnosis had been pelvic hæmatocele.

Prognosis. The prognosis in typhlitis in which no perforation occurs is good. The patients almost invariably recover. When there is a perityphlitis not suppurating the danger is from recurrences, in which suppuration may take place. Dr. Wm. Pepper has a paper in the Transactions of the Pennsylvania Medical Society for 1883, in which he lays particular stress upon this liability to recurrence, and gives one case of twelve relapses. If the disease goes on to perforation, then the result depends in great measure upon the course taken by the pus and the surgical means employed. A perforation through any part covered by peritonæum, including thus nearly all perforations of the appendix, is a desperately fatal accident. It is possible that adhesions precede the perforation, so that an opening is made directly or through the medium of an intraperitoneal abscess into one of the hollow viscera or through the abdominal wall. If a perityphlitic abscess forms, the most favorable course for the pus is through the cæcum or rectum. Perforation through the abdominal wall is not so favorable. Of twenty-eight cases collected by Dr. Bull, of New York, eleven were fatal.

Treatment. In non-perforative cases, if there is much pain and tenderness, opium is proper until there is less, then small doses of saline laxative guarded by a small opiate, for it is desirable to relieve the cæcum of contents, both for the sake of diagnosis (to exclude impaction) and to relieve the patient of pain caused by the distended gut. At the same time externally a poultice, ice, or counter-irritation, may be used. Calomel is used by English practitioners generally, and is now and then mentioned by Americans. If an abscess has formed it is to be evacuated immediately, and if there is a reasonable belief that pus is present, although no fluctuation is found, the surgeon is justified in or is required to test the belief by aspiration or incision. Upon the point of the diagnosis of pus Dr. Sands writes: "Rigor, sweating, high temperature, acceleration of pulse, abdominal pain and tympanitis, and an increasing extent combined with diminishing firmness of the abdominal tumor are the chief signs which indicate the formation of pus. But none of these signs is invariably present, and it would be a difficult matter to say which one of them is the most important. But although in the early stages of the disease it may be impossible to discriminate between the cases that are going to terminate by resolution and those that are to end in suppuration, the latter may usually be distinguished toward the close of the second week by the general unfavorable condition of the patient, who seems to be growing worse instead of better; whereas when resolution is about to take place, the later course of the disease is comparatively mild and favorable." The smallest aspirator needle may be freely used to decide the diagnosis. The operation is done by making an incision parallel with Poupart's ligament through the successive layers of the abdominal wall until the fascia transversalis is reached; the pus is then sought by the needle if fluctuation is not present, and the abscess then opened sufficiently to allow the entrance of a finger to explore the cavity for foreign bodies. Fæcal odor and the presence of bubbles of gas in the abscess do not prove the existence of a perforation of the intestine, though making it very probable. It is well to be aware that a perityphlitic abscess may be quite behind the colon and extending far upward toward the liver. In such case it would have to be approached from the side. Dr. Noyes, of Providence, has tabulated one hundred cases of this operation. The mortality was fifteen per cent. In Dr. Bull's sixty-seven cases of abscess tabulated in 1872, before the operation came much into use, the mortality was forty-seven per cent.

In cases of perforation into the peritoneal cavity it has been proposed to make an abdominal section, clean out the cavity, and stitch the opening to the abdominal wound. But the difficulty of diagnosis is too great to allow of spending much hope upon this idea.

CRITICISMS, FROM A CHEMICAL POINT OF VIEW, ON SOME FAVORITE PRESCRIPTIONS.[1]

BY HENRY LEFFMANN, M. D.

The few points that I present to the College this evening will include little that is absolutely new, but I think the time will not be entirely wasted, as I know that the prescription list of most of our drug stores will give numerous examples of the violation of chemical principles here mentioned. My attention was called to this topic by my being shown by an apothecary a prescription calling for syr. hypophosph., tinc. ferri chlor., acid. phosp. dil., concerning which he said that in the proportions ordered he could never make the mixture up clear. I examined the precipitate, and found in it, as I had expected, a large proportion of the iron and other basic ingredients. This is a simple case of incompatibility. Turning the matter over in my mind, it has seemed to me that while some attention is paid to cautioning students as to the general nature of incompatibility, very little or none is given, especially in the shallow chemical teaching of many medical schools, to the properties and qualities of chemical substances in their relations to the animal tissues and the manner of administration. I present here, therefore, a brief consideration of a few well-known remedies.

Under the name of *colorless tincture of iodine* several preparations are used, depending for their popularity on the fact that they do not stain the skin. They are prepared either by the use of ammonia or of sodium sulphite or hyposulphite. They owe their particular property, or rather absence of property, to the neutralization of the iodine, and just to the extent that the iodine is decolorized is it to the same extent deprived of virtue. The free active affinity of the iodine, to which its local action must be due, is destroyed in these preparations, and the destruction is not slow or uncertain, but in two of the methods

[1] Read before the College of Physicians of Philadelphia, April 2, 1884.

mentioned it is sufficiently rapid and definite to be made the basis of a method of quantitative analysis. It is certainly difficult to see how any person could go so wide of simple chemical principles as to invent or employ this mixture.

Potassium chlorate, or, as it is still erroneously called by many, chlorate of potash, is a remedy concerning which extraordinary claims have been made, based upon most erroneous notions of its chemical qualities. It is employed in the laboratory as a source of oxygen. Knowledge of this fact has led to its employment as an oxidizing agent in diseases which have been supposed to express deficient oxidation. I have nothing to say here as to the clinical results obtained from potassium chlorate in any disease, — although I believe it is much less in favor than formerly, — but I enter a protest against any advocacy of its usefulness as an oxidizing agent. Under temperatures and conditions such as those which it meets in the human system it is one of the most stable of bodies, does not part with its oxygen or chlorine, and, indeed, will not begin to do so except under very high heat. I have found by actual experiment that ten grains of the salt kept for two hours at a temperature of 100° F. in contact with an artificial gastric juice did not develop oxidizing qualities sufficient to oxidize one sixtieth of a grain of phosphorus. This experiment is merely confirmatory of what everyday experience with the substance teaches.

Potassium permanganate has been more or less in favor with physicians for a score of years. It is well known as an oxidizing agent, its powers in this respect are well marked. It is as little suitable for internal administration for such purpose as the body just considered, but for an opposite reason. Its chemical properties are developed by almost every substance, and in the doses in which it is given it will be decomposed and rendered inert very shortly after being swallowed. Within a very recent period the salt has come into notice as a remedy for amenorrhœa, and great has been the tribulation of apothecaries. It has been given in pill form, and all the usual excipients have been unavailable. I have made a few tests of the permanganate pills now in the market, and I find with regard to those made by one of the most reliable houses in this city that the permanganate is all decomposed and converted into the insoluble manganese dioxide. The preparations of two other manufacturers made up with some mineral excipient, probably kaolin, were in good condition, but as soon as placed in a mixture of hydrochloric acid and pepsine they begin to decompose into insoluble manganese oxide. These pills vary in strength from one eighth to one grain. This small quantity of permanganate certainly must soon decompose in the stomach, and the only virtue which it can have is from the manganese itself, and if this is effective common sense would seem to suggest that the result could be best obtained by exhibiting some definite compound of manganese, such as the chloride or sulphate. When we consider the chemical relations of the salt, and almost certain inertness of it in small doses, the gravity with weich the learned English therapeutists, who recommended it in amenorrhœa, have discussed the possibility of its producing abortion, becomes almost burlesque. I do not desire, of course, to impugn the clinical observations that have been recorded on this point, but I feel obliged to say that if the insoluble and variable decomposition products of one eighth of a grain of potassium permanganate can affect the function of any one organ, then the difference between us and the apostles of the infinitesimal is small indeed.

I cannot dismiss these two compounds, which owe their popularity to mistaken notions of their properties, without saying a word or two as to the exhibition of oxidizing agents. If rational therapeutics or physiological study indicates remedies of the so-called oxidizing class, then it will be found that no better agents are known to us than those which have long been in our hands. In nitric acid, nitro-muriatic acid, and chlorinated soda we have substances which are sufficiently stable to resist the organic bodies of the saliva and gastric juice, and are sufficiently active to give oxidizing effects if such (other than local action) can be obtained. I have grave doubts whether the nutritious fluids of the body can be oxidized by any method, but there can be no doubt whatever that such effect cannot be attained by either a body — potassium chlorate — which yields its oxygen only at a red heat, nor by one — permanganate — that decomposes the moment it touches any form of organic matter. Some years since a correspondent in one of our medical journals gravely recommended the use of raspberry syrup to disguise the taste of potassium permanganate. It was of course entirely successful, the taste was destroyed, so was the compound.

Caffeine citrate is a remedy much in favor, and is a remarkable instance of how much physicians take for granted in the remedies they use. There is no caffeine citrate in the market, and it is doubtful whether any such a salt can be prepared. The commercial preparations are either pure caffeine or variable mixtures of it with citric acid.

The manufacturers in this city each furnish a different article, except in cases in which they buy from a common source; and a house in a neighboring city furnishes an article which contains no citric acid. Some of the samples are purely bitter in taste, while others are distinctly sour. Analyses of some of the commercial salts are recorded in a paper read before the last meeting of the American Pharmaceutical Association by Dr. G. C. Wheeler. He found the quantities of caffeine varied from 96.5 per cent. to 63.5 per cent.; of citric acid from 63.5 per cent. to 3.5 per cent.; none of these figures correspond with the proportion of a true citrate.

It seems to me that accurate clinical observation cannot be made with a preparation of so uncertain a character; for, as seen by these figures, the proportion of active ingredient may vary thirty-three per cent., and the lesson that these analyses teach us is that when the effects of caffeine are wanted they are best obtained by the use of the pure alkaloid, and not by a pretended and uncertain compound of it.

HISTORY OF A CASE OF PERIHEPATIC ABSCESS.[1]

BY EDWARD T. BRUEN, M. D.,

Physician to the Philadelphia Hospital, Demonstrator of Clinical Medicine in the University of Pennsylvania.

The accompanying specimen exhibits an abscess which has occurred between the diaphragm and the liver. The abscess contained nearly a pint of laudable pus. The superior wall of the abscess was the

[1] Read before the College of Physicians of Philadelphia, April 2, 1884.

diaphragm, and the inferior the perihepatic capsule; the hepatic substance was not involved; indeed, the liver was normal. There were evidences of catarrhal inflammation in the colon, and one or two nearly cicatrized ulcers. The only other lesion in the body was found in the right pleural cavity, the lower portion of which was obliterated by inflammatory adhesions.

The clinical diagnosis presented some interesting features.

The patient, a young man aged twenty-eight, was admitted to the Philadelphia Hospital November 30, 1883. His previous history indicated that he had suffered from an attack of dysenteric diarrhœa four weeks before his admission, although he had convalesced from this attack. He was evidently much emaciated. The temperature until December 8th ranged from 100° F. to 102° F.; from December 14th, from 99° F. to 101° F., after which it never rose above 99⅘° F. in the evening, and was always 98° F. in the morning; this continued until the fatal termination of the case on the 20th instant. The pulse was usually above 100. There was occasional sweating; no chills. Extreme tenderness was felt over the hepatic region, associated with pain during the first ten days, the hepatic dullness extending four inches in the nipple line, and about five inches in the axillary region. Physical examination of the chest upon the right side revealed the evidences of a dry pleurisy; there was some cough, which was dry and hard, but not very annoying. Appetite and digestion were fairly good. Urine normal.

The diagnosis of hepatic abscess was made during the first week, chiefly because the symptoms of hepatic lesion, already detailed, were antedated by dysenteric diarrhœa. The pleural lesion was regarded as a secondary inflammatory process engendered by hepatic disease. On December 10th all symptoms of pain and tenderness had vanished; the patient's strength, appetite, and general condition markedly improved; the temperature had fallen to 99° F., so that the diagnosis was revised to that of perihepatitis. From December 10th the improvement continued until the 20th, when, after an attack of vomiting, the patient suddenly died.

The autopsy appeared to prove that the inflammation which resulted in the formation of the abscess was primary in the pleura, and the secondary irritation developed the local peritoneal process.

The symptoms of abscess in the hepatic substance are frequently latent. I recall one instance of a patient admitted October 9, 1877, who walked to the hospital and remained under treatment until the 15th, suffering from apparent remittent fever. The day of his death he rose, in the absence of the nurse, and walked down-stairs to smoke a pipe; that afternoon he had a hæmorrhage from the bowels, and died. The temperature of this patient was between 99° F. and 101° F., and the clinical diagnosis was remittent fever, or typhoid of the variety called ambulatorius. The autopsy revealed an abscess about the size of a fœtal head occupying the convexity of the right lobe of the liver.

In the case I have reported this evening the subsidence of pain and tenderness, and the temporary improvement of the patient, certainly misled me. Under similar circumstances I should certainly introduce an aspirator, as I was inclined to do in the beginning of this case, because I am satisfied that the healthy liver can be punctured by a fine needle without damage, whereas either a hepatic or perihepatic abscess may at any time prove fatal by rupture.

Finally, if my explanation of the ætiology of this abscess is correct, the case is interesting as showing the relation of pleurisy to serious perihepatitis.

REPORT ON DERMATOLOGY.

BY GEORGE H. TILDEN, M. D.

PEMPHIGUS.

The opinion of Hebra that acute pemphigus did not occur is no longer accepted as correct, many isolated instances as well as epidemics [1] of the acute form of the disease having been observed. Riehl [2] reports an interesting case in this connection. The patient, a boy fourteen days old, first presented, on the sixth day after birth, a tensely-filled bulla upon the neck, in a region which, the day before, was erythematous. Shortly afterward appeared upon the face and back, and later upon the arms, a number of fresh bullæ. When seen at the hospital the moderately well-nourished child showed upon the forehead, cheeks, and lower extremities irregularly disposed bullæ of sizes varying from that of a pea to that of a dove's egg, most of which were filled with a clear, yellow fluid, while in several the fluid was already opaque. The epidermis covering these bullæ was very thin, and gave way at the slightest insult, in consequence of which many of the lesions were in a collapsed condition, the mixture of epidermis and fluid contents forming yellowish crusts. The side of the neck and the anterior surface of the thorax and abdomen presented the appearance of a burn of the second degree, so thickly were the bullæ crowded together, almost the whole extent of epidermis in these regions being separated from its bed. The outer edge of this confluent mass of bullæ was irregularly crescentic in form, and was marked by a narrow red halo, which separated it from healthy skin. The isolated bullæ were also surrounded by erythema. There was no spontaneous pain, but the excoriated regions of the body were very sensitive to the touch. The child's urine contained no albumen, its bodily temperature remained normal, and examination of the internal organs gave no evidence of disease. The general condition of the infant was fair, and it took its nourishment regularly, although suffering for several days from diarrhœa of greenish, semi-fluid stools. Besides the general eruption of pemphigus there was a certain amount of eczema intertrigo in the groins, and in the mouth aphthous spots of moderate extent. The mother was perfectly healthy, and there was no evidence of syphilis in either parent, while a former child, already sixteen months of age, had always been in good health.

The treatment consisted in the application to the eczematous regions of starch powder, and to the rest of the body of a mixture of olive oil and lime-water, while at the same time attention was given to the state of the bowels. The child was entirely well in about three weeks, the most prominent symptom, namely, the formation of bullæ, lasting in all about two weeks. The defect in the epidermis caused by an individual bulla was repaired in about a week, and there re-

[1] Bohn Hautkrankheiten, page 191, supplement to Gehrhardt's Handbuch der Kinderkrankheiten, and Ziemssen's Handbuch der sp. Path. und Therap., Band xiv., page 537.

[2] Wiener med. Wochenschrift, No. 51, 1883.

mained behind merely slight redness and subsequent yellowish pigmentation of the affected regions of the skin.

The contents of the freshly-formed bullæ was of neutral reaction, coagulated rapidly upon exposure to the atmosphere, and upon microscopic examination showed the presence of nothing but epidermal detritus and leucocytes. The covering of the bullæ was found to be made up of the horny layer of the epidermis and of the cells of the granular layer, together with a slight admixture of white blood corpuscles. In each one of the twenty specimens examined were found quantities of a vegetable micro-organism consisting of various sized and irregularly shaped groups of conidia or spores. These collections of spores were situated between the layers of epidermis, and accumulated, as a rule, about the openings of the cutaneous follicles. The hair follicles and the excretory ducts of the sweat glands were not unfrequently found to be stuffed full of conidia. Bands of mycelium were also present, but in very small amount, being either isolated or inclosed in groups of spores. These micro-organisms resembled very much in appearance those found in tinea trichophytina, but the amount of mycelium present was very much less than in this disease, and the grouping of the spores was more like what one finds in tinea versicolor.

In the writer's opinion the constant presence in large quantities of these micro-organisms, taken together with the fact of their situation inside of the hair follicles and ducts of the sweat glands, is evidence against their accidental admixture with the specimens examined, and is sufficient to justify the assumption of their being the ætiological factor in the production of the cutaneous lesions. That the presence of such micro-organisms in the delicate skin of infants is competent to cause the formation of bullæ is demonstrated by an instance mentioned by Riehl, in which the ordinary lesions of tinea trichophytina corporis upon an infant six months of age developed subsequently into a bullous eruption resembling in appearance pemphigus serpiginosus. Such ætiology would account for the appearance of acute infantile pemphigus in epidemics, and justifies the opinion of Olshausen and others that the disease is an infectious one. The afrebrile course of the malady, moreover, and the comparatively slight influence which it has upon the general condition of the affected children goes to show that the cutaneous lesions in such cases are due to some cause the influence of which is confined to the skin.

Dr. P. Mayer [1] publishes a case of fatal pemphigoid dermatitis. The patient, a man, sixty-five years of age, was first attacked by an eczematous eruption upon the body, which was attended by intense itching. Four weeks afterward there began to appear upon the trunk and lower extremities irregularly distributed bullæ, while at the same time ominous symptoms of general disturbance showed themselves, consisting in loss of appetite, sleeplessness, and fever, together with rapid failure in strength. The cutaneous lesions increased in extent, and developed into ulcerations with diphtheritic exudation. Death took place in the seventh week from the beginning of the malady.

At the autopsy, with the exception of nodules of broncho-pneumonia, there was nothing abnormal found in the internal organs. Microscopic examination of the skin, however, showed the existence of widely-spread endo-arteritis of the cutaneous blood-vessels, causing obliteration of their calibre. Many of the cutaneous nerve fibres in the unaffected as well as in the diseased regions of the body were found to be in the early stage of parenchymatous degeneration. The motor nerves and the nerves of the sympathetic system were unaffected, as were also the roots and ganglia of the spinal nerves. The spinal cord itself, however, upon microscopic examination showed evidence of pathological changes, consisting in grayish bands running along the posterior fissure of the cord throughout the whole of the cervical and dorsal regions. Similar appearances were also to be seen in the posterior columns of the upper dorsal region, and in the lateral columns of the lower dorsal and the lumbar regions were translucent patches. The microscope showed in all these situations thickening of the interstitial tissues, and the occasional formation of bands of sclerotic connective tissue, as a rule following the course of the blood-vessels, which themselves presented thickened walls, and, in consequence thereof, partially obliterated lumen. The anterior columns of the cord were entirely normal in appearance.

The author refers to the recent works of Leloir and Schwimmer concerning the neuro-pathogenesis of cutaneous disease, and is of the opinion that at present (thus far) all that is proven in such cases is coincidence between affections of the spinal cord and synchronous disease of the skin. Concerning the case published by himself, he draws attention to the coincident and extensive obliteration of the calibre of the blood-vessels in both the spinal cord and skin, and concludes that by reason of such changes in the blood-vessels there ensued disturbances of nutrition in both of these organs. In the spinal cord, as is often seen, such nutritive disturbances resulted in sclerosis of the interstitial tissue, and in consequent degeneration of nerve tissue. In the skin, on the other hand, there was produced trophic disturbance sufficient to cause the cutaneous pathological process, already set up by changes in the central nervous system, to assume unusual severity, and thereby destroy the life of the patient.

Another case of acute and fatal pemphigus in an adult is published by Dr. Danek.[2] The patient was a healthy man, twenty-two years of age, with good family history, and presenting no evidence of syphilis. He was first attacked by a chill, which was followed by fever, and was seen in the hospital two days afterward. He was well nourished, but the mucous membranes were somewhat pale. The neck, chest, both front and back, the arms, and, to a less degree, the belly and lower extremities, were covered with numerous bullæ of sizes varying from that of a pea to that of a hazelnut, which were filled with a clear, yellow fluid, and situated singly and in groups upon an erythematous base. There was no evidence of disease of any of the internal organs, and there was no albumen in the urine. Fever, however, was present, the evening temperature being as high as 39.4° C. The bullæ increased in size and number, and coalesced to such a degree that in ten days' time the body was almost covered by them, and large regions of skin were deprived of epidermis. At the same time bullæ of smaller size began to appear upon the mucous membrane of the lips and mouth, and the general condition of the patient became rapidly worse, with increase of fever, and the appearance of albumen in the urine. Shortly before death,

[1] Virchow's Archiv, Band xciv., Heft 2.

[2] Wiener med. Wochenschrift, No. 36, 1883.

which took place in three weeks from the beginning of the disease, the body presented the appearance of a burn with widely spread cutaneous suppuration, accompanied by continual high fever, diarrhœa, and delirium. At the autopsy, with the exception of hypostatic pneumonia in the base of each lung, there was nothing abnormal to be detected in any of the internal organs. The spinal cord also presented upon careful examination no pathological changes. The peripherical nervous system and the skin were not examined microscopically.

HERPES ZOSTER.

The case of a woman seventy-six years of age, who died in hospital after having had an attack of herpes zoster intercostalis dexter, affords to Dr. Lesser[1] the opportunity for the discussion of the above subject. The eruption commenced between the spinous processes of the second and third dorsal vertebræ and extending forwards over the right breast finished at the point of attachment to the sternum, of the cartilage of the fifth rib. The eruption consisted of the usual vesicular and pustular lesions of herpes zoster and of superficial ulcerations caused by the coalition and breaking down of the same. The region of skin affected was that supplied by the fifth and partially by the fourth pair of intercostal nerves. The patient died some three months after the beginning of the cutaneous manifestations, which at the time of death were entirely healed with the formation of superficial cicatrices.

At the autopsy the fourth, fifth, sixth, and seventh intercostal nerves were dissected out from their point of exit from the foramina intervertebralia as far as the axilla. The sixth and seventh nerves were entirely normal. The fifth nerve was notably thinned, flattened, and of a reddish-gray translucent color. Similar but much less marked changes were to be seen in the fourth nerve. The spinal ganglia corresponding to the above nerves and the fourth sympathetic ganglion were subjected to microscopic examination. The sixth spinal and the fourth sympathetic ganglia were normal, while the fifth spinal ganglion presented marked pathological changes. The upper half, which was darker than normal, showed absence of almost all nerve tissue, this being replaced by connective tissue which was united with the connective tissue envelope of the ganglion, which itself was much thickened. At the line of junction between the normal and pathological regions the blood-vessels were notably dilated. The small amount of nerve tissue recognized as present in the upper half of the ganglion was mostly in a condition of granular degeneration. The lower half of the ganglion presented the normal condition of things, namely, a fine net-work of cellular connective tissue, containing strongly pigmented ganglion nerve cells and bundles of nerve fibres. Microscopic examination of the fifth nerve itself showed granular degeneration of numerous nerve fibres. The fourth spinal ganglion showed changes similar to those found in the fifth ganglion, while the fourth intercostal nerve on the other hand was entirely normal in appearance.

As cause, therefore, of the cutaneous lesions in the above case may be assumed the formation of cicatricial tissue and consequent destruction of nerve tissue in the fourth and fifth spinal ganglia and secondary degeneration of the fifth intercostal nerve. The ætiological factor in the production of herpes zoster is in the majority of cases pathological change in the spinal ganglia or in the Casserian ganglion, in some instances changes also in the peripherical nerves, and in very rare instances disease of the central nervous system. Of fourteen autopsies in cases of herpes zoster known to the author, in eleven there was undoubted disease of the spinal ganglia corresponding to the nerve supply of the regions of skin involved by the eruption, in one case a neuritis, in one instance pathological changes in the corresponding posterior spinal root, and in another cicatricial contraction in the origin of the trigeminus and probable remains of inflammatory processes in the Casserian ganglion.

As to the manner in which such changes in the nervous system give rise to the cutaneous manifestations of herpes zoster there are three hypotheses: —

(1.) The opinion of Friedreich that the eruption is due to a progressive neuritis which starts from the ganglion involved and finally reaches the ends of the cutaneous nerves, and in this way gives rise to the pathological changes in the skin. The fact, however, that cases of herpes zoster are almost never attended by motor disturbances, although the motor and sensory nerve fibres join immediately beyond the ganglion to be intimately united throughout the whole of their course, is evidence against the correctness of this opinion. In typical inflammations of the peripherical nerves, motor disturbances consisting in motor irritability, paralysis, and muscular atrophy are common symptoms. It was the fact that motor disturbances are so uncommon in cases of herpes zoster which led V. Bärensprung to seek for the cause of the disease in the posterior spinal ganglia. The small number of cases of herpes zoster in which motor disturbances are observed are dependent upon peripherical neuritis, and not upon disease of the spinal ganglia. Another fact which goes to disprove Friedreich's supposition is that, as a rule, the cutaneous manifestations of this disease appear at once and at some distance from the origin of the nerve (resp. ganglion) in which pathological changes have taken place, whereas if the eruption were due to a progressive neuritis it would appear in successive crops.

(2.) The idea that the eruption of herpes zoster is due to vaso-motor paralysis as supposed by Eulenberg[2] and Landois[3] is also not competent. Disturbed innervation of the cutaneous blood-vessels can result only in anæmia or hyperæmia of the region of skin concerned or in the exit of some of the constituents of the blood into the surrounding tissues. Such cutaneous eruptions are those which consist of erythema in its various forms and in the production of wheals the type of this variety of cutaneous pathology being urticaria. Entirely different from the above are the changes which take place in herpes zoster, which consist in typical inflammatory processes, the responsibility for which it is impossible to place upon vaso-motor disturbance.

(3.) The majority of observers have contented themselves with supposing trophic disturbance without going more definitely into the question. The theory of Neisser and Weigert[4] that it is the death (necrosis) of superficial particles of the skin caused by disturbance of innervation which gives opportunity for the entrance of "infectious material" and consequent suppuration in herpes zoster is suggestive. In the opinion of the writer, leaving "infectious material" out of the ques-

[1] Virchow's Archiv, Band xciii, Heft 3.

[2] Berliner klin. Wochenschrift, No. 20, 1867.

[3] Wiener med. Wochenschrift, 1867.

[4] Eulenberg Real-encyclopädie, iv., p. 666.

tion, the death of portions of the skin is in itself sufficient to account for the eruption of herpes zoster. Each one of these necrosed portions acts as a foreign body upon the surrounding tissues, which react to such irritation with hyperæmia and inflammatory exudation. To show that disturbance of innervation is competent to cause death of tissue, the writer refers to the cases of acute decubitus which are seen in connection with disease and injuries of the spinal cord, and also to the cases of so-called herpes zoster gangrenosus in which the region of skin affected by the eruptions becomes necrosed, forming a sharply defined slough which extends into the corium. Kaposi's opinion that this gangrene is due to compression of the tissues by reason of hæmorrhage into the same is not supported by the fact that other cutaneous lesions in which hæmorrhages of much greater extent take place into the skin do not result as a rule in cutaneous gangrene. The writer considers that the simultaneous appearance of gangrene in all of the regions affected by the eruption of herpes zoster points to some cause situated in the nervous system. The hæmorrhages which take place in herpes zoster are easy of explanation. If necrosis affects the epidermis alone there results merely exudative inflammation without hæmorrhage, but if the corium becomes gangrenous, then the papillary and deeper blood-vessels of the skin are involved, and hæmorrhage to a greater or less extent takes place. The author sums up the matter as follows: "By reason of cessation of the function of certain nerves there is caused, in corresponding regions of the skin, the death of particles of tissue which may either be superficial and of microscopic size or of larger size and more deeply situated. The presence of such particles of necrotic tissue in the skin leads to reactive inflammatory processes which in the first instance result in the formation of vesicles without evident gangrene, and in the second cause the formation of a slough. It is probable that the above nerves arise in the spinal ganglia and in the Casserian ganglion, and that they accompany the sensitive nerves to the skin. The function of these nerves may be interfered with by disease of the ganglia, which is the most common cause of herpes zoster, or by inflammatory processes or injuries affecting them at some part of their course after leaving the ganglion from which they arise.

THE TUBERCLE BACILLU AND LUPUS.[1]

Koch[2] had placed at his disposal, for purposes of examination with regard to the presence of the tubercle bacillus, specimens from seven cases of undoubted lupus. The specimens from four cases consisted of bits of excised skin, and from the other three only the débris resulting from scraping was available. The bits of excised skin could alone be utilized for the purposes of direct microscopical examination. In each one of these four specimens the tubercle bacillus was detected, although only in a small number of preparations from each specimen, and only inside the giant cells. Such is the scarcity of the tubercle bacillus in lupus that in one instance twenty-seven and in another forty-three sections were examined before the bacillus was detected. It repeatedly happened, that after a number of sections were examined without showing the bacillus a group of successive sections, each containing from one to three bacilli, was met with. More than one bacillus was never seen in any giant cell. From each of the above seven cases inoculation of lupus material in the anterior chamber of the eyes of rabbits was made, and tuberculosis of the iris was produced in every instance, resulting in those animals which were allowed to live long enough (not immediately killed) in generalised tuberculosis. From one specimen of lupus the bacillus was cultivated, and inoculations of this cultivation upon animals were made with success in several instances.

[1] Vide Derm. Report in the JOURNAL of October 25, 1883.

[2] Mittheilungen aus dem Kaiserlichen Gesundheitsamte, Band ii., page 38.

THE SONG OF THE TUBERCLE BACILLUS.[3]

I.

Du hast ja die stärksten Gläser
Hast grossen Namen und Ehr'
Und hast auch die schärfsten Augen
O Koch — was willst Du noch mehr!

II.

Wir ruhten bisher in die Lunge
So sauft — da kamst Du daher
Und liessest uns Farbe bekennen
O Koch — was willst Du noch mehr?

III.

Du hast uns verpflanzt und gezüchtet
Auf Hunde — wie ordinär!
Und hast uns zu Grunde gerichtet,
O Koch — was willst Du noch mehr?

IV.

Wir büssten unser Prestige
Vom Auge stürzt uns die Zähr'
Wir kriegen noch selber die Schwindsucht
Vor Aerger — was willst Du noch mehr?

[3] Wiener Caricaturen, March, 1884.

Hospital Practice and Clinical Memoranda.

MASSACHUSETTS GENERAL HOSPITAL.

FOUR CASES OF STRANGULATED HERNIA IN THE SERVICE OF DR. JOHN HOMANS.

REPORTED BY DR. CHARLES W. GALLOUPE, HOUSE SURGEON.

I. STRANGULATED HERNIA. HERNIOTOMY. RECOVERY.

ISAAC B., a Polish Jew, fifty years of age, entered on the night of July 26, 1883. Has had inguinal hernia on the right side for twenty-five years, which he has previously reduced by crossing his legs and pressing on the hernia with both hands. He has worn a truss only a portion of the time. He has had symptoms of strangulation several times, but never lasting over half an hour, and always disappearing with the reduction of the hernia. The present symptoms have lasted half a day.

At the time of entrance the scrotum was distended to the size of a man's head, hanging down nearly to the man's knees, and pyriform in shape. It was hard, tense, red, and sensitive to the touch. He had been vomiting *constantly* since the strangulation, and had had severe pain in the bowels for five hours.

He was etherized and a vertical incision was made over the ring by transfixing a fold of skin pinched up transversely. The tissues beneath were divided on a director, layer by layer, down to the peritonæum, and the intestine easily reduced without opening the peritoneal sac. A drainage tube, an inch and a half long,

was laid along the bottom of the wound and the skin sewed together with carbolized silk. A carbolized sponge covered with carbolized gauze and compresses of carbolized gauze were placed over the wound and held in position by a spica bandage, — the whole dressing being subsequently sewed firmly together.

July 28th. The dressing, being somewhat stained with blood, was changed under carbolic spray. The wound looked well, and the general condition of the patient was excellent. He took brandy, beef tea, and milk in small amounts at short intervals. Temperature at night 100° F.

July 29th. Last night the patient, who is extremely ignorant, tore off all the dressings and got out of bed to urinate. When discovered the intestine was down, forming a hernia the size of a cocoa-nut; this was easily reduced, however, the wound thoroughly carbolized, and a fresh dressing applied.

July 30th. Patient passes flatus freely, and to-day had two natural dejections.

August 3d. The drainage tube and the stitches were removed, and collodion and crêpe lisse "butterfly" put over the wound to prevent its gaping. No tenderness.

August 6th. Truss adjusted over an antiseptic pad, and patient allowed to walk about.

August 9th. Discharged well, wearing a truss which keeps the hernia in place.

Temperature normal throughout after the first twenty-four hours.

II. STRANGULATED HERNIA. OPERATION. DEATH.

John D., aged forty-five years, entered on the night of July 27th with strangulated inguinal hernia on the right side. He was ruptured many years ago, and has never worn a truss. For the past three days the hernia has been strangulated, and during that time he has been suffering severe pain and has been vomiting constantly.

At the time of entrance the scrotum was the size and shape of a man's head, red, tense, and sensitive. Patient was in a state of collapse, the pulse was very feeble, and the extremities cold.

The patient was etherized and a vertical incision was made over the ring; the tissues were divided on a director down to the peritonæum, which was then cut, giving exit to about a quart of thin, yellow fluid, which not only came from the hernial sac but ran out of the peritoneal cavity. The portion of intestine visible was of a dark-red color. The ring was divided, and the intestine finally put back with some difficulty. The wound was sewed up with silk (the stitches including the peritonæum), a small drainage tube was inserted into the peritoneal cavity, and a sponge and compresses of carbolized gauze tightly bandaged on. Patient vomited at intervals for three hours, complaining of intense thirst. Temperature 96° F. He was given brandy and milk by the mouth and rectum. The pulse improved a little, but he gradually became weaker, the skin being cold and moist, and he died at twelve o'clock P. M., about twenty-four hours after the time of entrance.

III. STRANGULATED HERNIA. OPERATION. RECOVERY.

John C., an Irish hostler, forty-seven years of age, entered the hospital September 5th, at eight o'clock A. M., with strangulated inguinal hernia of the right side. Nine months ago he came to the hospital with a strangulated hernia, which was reduced by the house officer without any difficulty. This time the hernia had been down for three hours, and during that time he had suffered constant pain and nausea. The hernia was the size of an orange, but very tense and hard.

Patient was etherized and an incision four inches long made over the ring, and the tissues carefully dissected off until the peritonæum was reached. An attempt was then made to reduce the hernia, but it was not successful. The peritonæum was then divided, allowing about half an ounce of fluid to escape. The intestine for a distance of three inches was congested and like liver in color, and was adherent to the neck of the sac. The ring was then divided, and the intestine easily replaced. A drainage tube was inserted into the abdominal cavity, the wound sewed with silk, and covered with a graduated compress of carbolized gauze and bandaged.

Patient had considerable pain, requiring opiates twice during the day. At midnight he vomited about two quarts of dark-colored extremely offensive material.

September 6th. Patient was ordered beef tea one ounce every two hours, alternating with brandy one ounce by rectum, with twenty-five drops of laudanum until pain and restlessness should be relieved, nothing being given by the mouth. The dressing was changed under carbolic spray and all antiseptic precautions, and the wound found to be looking perfectly well. Temperature 99° F. in the morning and 96° F. at night. Pulse 120 at night.

September 7th. Patient feels much better, although still very weak. The dressing was changed under spray and the wound found to be doing perfectly well. He has passed flatus several times. Temperature 99° F. to-night; pulse 80.

September 8th. Patient feels perfectly well. Enemata of beef tea omitted, and brandy one ounce given by enema every three hours. A teaspoonful of milk given by mouth every four hours. Had a good movement of the bowels this morning. To-night the temperature was 100° F., and the pulse 100.

September 9th. Has no nausea, but slight hiccough. Milk increased to two teaspoonfuls every two hours. Temperature normal; pulse 95.

September 10th. Bowels move normally; patient put on unrestricted liquid diet.

September 11th. All the sutures and the drainage tube left out. From this time forward the temperature fluctuated irregularly between 97° F. and 99° F., and the pulse between 70 and 90.

September 16th. Complained a little to-day of pain and burning in the stomach and vomited twice.

September 22d. Wound nearly healed. Patient up and about.

September 26th. There remains only a superficial granulating surface the size of a pea. Patient discharged, wearing a truss.

IV. IRREDUCIBLE HERNIA. OPERATION. RECOVERY.

J. S. B., a native of Scotland, forty-six years of age, walked into the hospital October 19th, and gave a history of right inguinal hernia for fourteen years; it has always been reduced for the greater part, but a small lump has remained outside the ring which he thinks is the testicle, as it is congenitally absent on that side. For the past four days the tumor has been the

size of a hen's egg, irreducible, and the skin over it is red and tender. He has no pain, vomiting, or other symptom.

October 20th. Patient was etherized and tumor cut down upon under carbolic spray and all antiseptic precautions. Before opening the peritonæum the greater part of the hernia was reduced with a distinct gurgle. The peritonæum was then divided, and there was no escape of fluid. A small lump of omentum, the size of a walnut, was found to be adherent outside the ring, which was then divided, allowing complete reduction. The testicle was nowhere to be seen.

The peritonæum was sewed up with a continuous catgut suture, entering at one end of the cut, traversing the wound, and emerging at the point of entrance; the two ends were then tied tightly, closing the wound by puckering it up. The skin was sewed with silk over a small drainage tube. A sponge and compresses of carbolized gauze were bandaged tightly on.

September 21st. Feels no discomfort. Temperature 100.5° F.

September 24th. Dressing changed under spray, and tube shortened to one half inch. Wound entirely healed except at point of exit of tube. Bowels moved by enema.

September 26th. Dressing changed; tube and stitches removed.

October 28th. Collodion and crêpe lisse "butterfly" applied to draw the wound together.

October 31st. Very small superficial wound remains. Graduated compress of carbolized gauze and spica bandage applied, the whole being firmly sewed together, and the patient discharged.

Reports of Societies.

BOSTON SOCIETY OF THE MEDICAL SCIENCES.

W. W. GANNETT, SECRETARY.

Meeting March 20, 1883.

Dr. Charles S. Minot gave an abstract of the results of recent investigations concerning

THE LIFE-HISTORY OF THE DISTOMA HEPATICUM,

the complete cycle not having been known until last year.

The eggs pass from sheep upon fields and from there are washed into pools. In the pools the larval form hatches, which swims about until it meets its first host, this being a snail, Lymnæus trunculatus. The larva gets into the animal, changes to a sporocyst, in which develop numbers of smaller larvæ, which are discharged from the cyst, pass through the body-wall of the host, encyst upon grass or elsewhere, and in turn are eaten by the sheep, in which they assume the adult form, thus completing the life-history.

Dr. J. Collins Warren made a preliminary report upon his investigations concerning certain changes observed in

THE HEALING OF ARTERIES AFTER LIGATURE.

Investigators who have interested themselves in the process of repair in arteries have considered the question usually from some special stand-point such as "the organization of the thrombus," "the part played by the white corpuscles," "the endothelium," etc. The object of this paper is to study the various pathological changes which occur in and around the vessel from the time the ligature has been applied until the process of cicatrization has fully completed itself.

These changes may be compared not inaptly to those which occur in long bones after fracture. In both we find an external and an internal callus, the former having only a provisional existence in the case of arteries, and subsequently giving place to a ligamentous union of the divided fragments, the latter undergoing such changes in the later stages of the process that the canal or lumen of the vessel is imperfectly reëstablished by the so-called "canalization" of the thrombus. In the mean time the walls of the vessel, like the cortical bone, have undergone certain changes which enable them to participate in the final process of repair.

When a large artery is tied in its continuity, the intima and a portion of the media are usually ruptured, and the adventitia is gathered into a dense tendinous-like sheath around the constricted ends. The first noticeable change is the formation of the thrombi and the development of a granulation-like mass of cells about the ligature, which if it has been cut short is completely enveloped by them. This appears to proceed from the connective tissue which surrounds the vessel, the periadventitial tissue. When the injury done by the constricting ligature is slight this new formation will be less in quantity, but if the coats of the vessel have been considerably bruised and a certain amount of extravasation has taken place, or the ligature has created irritation, the surrounding inflammatory tissue will form a well-marked callus. When one end of the ligature is left uncut or suppuration has taken place, the surrounding callus is imperfectly developed and secondary hæmorrhage is more likely to occur. Following the development of this tissue, we find it extends some distance up and down the sides of the divided vessel in the periadventitial tissue, the round cells of which it is composed invading only the superficial layers of the adventitia; at the point of ligature, where the fibres of the outer wall are densely packed, the cells at first do not penetrate at all; they follow the ligature as it cuts its way through, and indeed appear to exert a solvent action on the resisting fibres of the adventitia. As the walls thus liberated retract, the cells penetrate through various clefts and spaces, and eventually make their way into the clot and contribute more or less to the development of the internal growth. When a double ligature has been placed upon a vessel these cells find their way into the isolated central portions at the retracted ends and not through the walls directly as some investigators have supposed, and gradually disintegrate the various coats, invading them eventually from every point. The process, however, is a slow one, and requires several weeks for its accomplishment. If the artery has been properly removed from the body we find this growth forming a callus-like ring at the ligatured spot, in size about twice the thickness of the vessel. This was shown particularly well in the femoral artery of the dog killed on the tenth day. At the end of a month evidences are still present of such a cicatricial mass of tissue, but at three months a slender cord only unites the peripheral to the proximal end.

Early changes are seen in the proximal thrombus, well advanced already on the fourth day. In the carotid of a dog an abundant growth of young tissue was found budding from the ruptured ends of the media, and spreading in various directions throughout the clot, at-

taching itself to the wall at various points, and leaving spaces or meshes still occupied by the blood clot. As these fragments of clot become disintegrated and disappear, spaces are left into which blood eventually circulates, and the so-called "canalization" of the thrombus is effected. By the fifteenth day the new tissue has become very abundant, and has the appearance of granulations growing into and replacing the thrombus. By the end of a month we find but fragments of the thrombus remaining, and the granulations now present themselves to the lumen of the vessel. We find here a free communication between the spaces which separate these granulation-like masses and the lumen and an injection mass can be forced successfully for a considerable distance into them. The vessel walls are in the meanwhile undergoing certain changes. There is unquestionably a proliferation of the cells of the intima. This can be conveniently studied in those specimens where the distal thrombus is small, or in the space between two ligatures; the amount developed, however, is not sufficient to supply but a small fractional part of the internal callus. The rôle played by the endothelium appears to be one which furnishes a new endothelial covering to the cicatricial tissue and a lining to the new vessels that have been formed. Wherever the intima has been ruptured and the media exposed we find an intimate connection existing between it and the new tissue; at an early stage of the process cells are seen springing from the muscular layers and projecting into the thrombus; later one sees elongated spindle cells, like those forming the muscular layer, projecting from this layer into the newly-formed tissue, sometimes singly, sometimes in bundles, and occasionally occupying a considerable space.

At the point of ligature the elastic lamina appears frayed out, and is seen extending in various directions through the new tissue; the media begins by the end of the second week to retract, as also does the adventitia, leaving a space through which vessels eventually find their way, and communicate with those coming down from the lumen.

At the end of three months the cicatricial process is completed, the external callus has disappeared, and is replaced by a cord of connective tissue which joins the two ends of the vessel, now widely separated from one another. No traces of the thrombus are to be found, except a few pigment granules. A cicatrix, more or less voluminous, according to the size of the vessel and the situation of the ligature, is seen.

In the femoral artery of a large dog a very beautiful example of this was seen. The cul-de-sacs of the two ends were occupied by a semilunar mass of tissue, with its concavity towards the lumen. On the surface of this cicatrix was seen a thin layer of endothelium; beneath this was a crescent-shaped layer of cells, the horns extending up some distance on the sides of the vessels. These cells were parallel to one another and to the arc of the circle made by the layer. On a careful examination they were found to resemble more closely the *muscular* fibre cell than any other. The long prolongations and the staff-shaped nuclei were demonstrated by various methods of staining. A special series of stainings with aniline dyes and examination under Zeiss's oil immersion showed a close resemblance between these nuclei and those of adjacent muscular cells. Cross sections were confirmatory of this view. Below this layer was the body of the cicatrix, which consisted of interlacing fibres of connective tissue dotted over with masses of blood pigment. Through this tissue a large vessel made its way from the fundus of the cul-de-sac, rapidly diminishing in size and breaking up into branches, which anastomosed freely with a series of capillary vessels which lay between the slightly retracted walls of the vessel, and communicated with others in the slender ligament.

We see here an explanation of the immunity of cicatrices of this kind from aneurismal dilatation which occurs so frequently after wounds of vessels. The protective influence of the thrombus insures the development of a tissue closely resembling the three layers of the vessel wall, and having all the powers of resistance which they possess.

In the larger vessels of the human subject, where there is less muscular and more elastic tissue, the new muscular tissue is not so evident, but the connective tissue is greatly increased in quantity, and extends for a long distance into the lumen of the vessel. This was seen in a ligatured carotid artery of a man who died four years after the operation.

To summarize briefly, the ligatured artery is invested by a protective layer of new tissue formed from the periadventitial tissue, which, if well developed, gives great security against hæmorrhage until the permanent cicatrix has grown sufficiently strong. This may be likened to the provisional callus of bone. There is also an internal growth or callus formed from several sources, namely, the intima to a slight extent, the media more largely, also from cells finding their way from the periadventitia at a late stage through the retracted ends of the vessel. The thrombus is a mere passive structure, takes no part in the growth, but is protective, and affords an excellent medium for the new tissue to germinate in. When the provisional part of the internal callus has disappeared we find remaining a cicatrix closely resembling the three coats of the artery, and affording by virtue of its peculiar structures an equally effective resistance to the pressure of the blood column. The ligament which unites the two ends of the vessel represents in part the residue of the external callus, but also a portion of the walls of the vessel which have been absorbed during the inflammatory process. A vessel successfully ligatured in its continuity cannot, therefore, be said to have been "ulcerated" into two separate portions, but must be conceived of as a hollow tube which has solidified into a solid columnar mass of tissue a considerable portion of which subsequently shrinks into a cord.

NEW YORK ACADEMY OF MEDICINE.

AT a stated meeting of the Academy, held April 17th, DR. ROBERT ABBE read a paper on

DUPUYTREN'S FINGER-CONTRACTION.

This was the affection, he said, which Dupuytren described after making his dissection of the hand of a subject of deformity of the fingers who died in 1831, which demonstrated conclusively that the tendons, articulations, ligaments, synovial membranes, and bones remained entirely unaffected, and that the trouble was located in the palmar aponeurosis. A dozen dissections made since then had confirmed the correctness of the results of his investigations. Mr. Adams, of London, he continued, had given to the profession the best résumé of the subject which had yet appeared, and in

it he said that the anatomical conditions presented in Dupuytren's contraction all agreed in negativing the supposition that the tendons or sheaths of the tendons were involved. This was also confirmed by his own clinical experience, as he had invariably found that, after dividing subcutaneously a tense and prominent cord, which had generally been mistaken for a tendon, in the palm of the hand, the patient was immediately able to flex the finger as strongly as before the operation, at once disproving the opinion often expressed by surgeons that such fingers would remain stiff and inflexible after the operation. Of the course of the disease Mr. Adams says: The commencement of this form of contraction is sometimes to be traced in one hand in patients in whom the contraction exists in a severe form in the other, and I have watched its commencement from a flattened nodular induration in the palmar fascia in or just above the transverse crease in the palm of the hand corresponding to the metacarpophalangeal articulations. In the beginning the skin is not adherent to this flattened induration; but in the second stage the skin becomes adherent to the thickened fascia, and a puckered dimple is produced, extending from which towards the finger a thickened band of fascia can be distinctly felt. The third stage consists of an increased thickening of the palmar fascia and the band leading to the finger; and also the formation of a thick cord-like band of fascia, leading from the central thickening towards the annular ligament of the wrist, accompanied with a gradually increasing drawing down of the finger or fingers towards the palm of the hand.

This affection, Dr. Abbe went on to say, rarely occurred before middle life, and in a paper published by Dr. W. W. Keen, of Philadelphia, two years ago, in which he collected the statistics of all the cases that had then been reported, 105 in number, the average age of the patient at the time of the commencement of the trouble was found to be forty years. It was comparatively rare in women, occurring in only one case in twelve, and the ring and little fingers were the ones by far the most frequently affected. These statistics showed that the ring finger was implicated in eighty-eight cases, the little finger in seventy-seven, the index finger in thirteen, and the thumb in nine.

In the course of the paper Dr. Abbe gave a detailed description of the clinical history of the disease, dwelling particularly upon the associated pains and nervous disturbances which often characterized it, and suggested a "working hypothesis" for it somewhat as follows: —

The primary cause of trouble is a slight traumatism, which not infrequently escapes observation, and a spinal impression is produced by this peripheral irritation. A reflex impression is then conveyed to the part originally affected, resulting in the production of insensible hyperæmia and nutritive changes, which cause a permanent thickening of the palmar fascia and the formation of contraction bands binding down one or more of the fingers. Finally, through the tissue-contraction, there results a secondary series of neuralgic and other disturbances of sensation. The latter, he said, resembled to a considerable degree the manifestations of rheumatism; and in this connection he alluded to the nerve theory of acute rheumatism propounded a number of years ago by Dr. J. K. Mitchell, of Philadelphia, and the assertions of Weir Mitchell, Brown-Séquard, and others in regard to arthropathy. Mr. Adams's opinion was that Dupuytren's contraction nearly always depended upon a constitutional rather than any local cause, and essentially he regarded it as depending upon a gouty diathesis; but the hypothesis of a primary traumatism and reflex nervous irritation which he had suggested offered, he believed, a more satisfactory explanation of the peculiar phenomena of the disease. The not infrequent symmetry in the complaint had been regarded as a strong argument for its constitutional origin, but the production of sympathetic ophthalmia through the action of the ciliary nerves showed how a symmetrical affection could be produced by a purely local cause. In Keen's 105 cases the presence or absence of gouty trouble was noted in only forty-eight; but in no less than forty-two of these it was stated to be present. It could not be doubted, however, that in by far the larger proportion of the remaining cases there was no such complication, as it would have been mentioned in the histories given. When, therefore, the presence of the gouty diathesis was found he believed it to be simply a coincidence; but as gout was exceedingly prevalent among the upper classes of English society to which Mr. Adams's practice was, as a rule, confined, he could not wonder that that authority had been led to the conclusion which he had adopted. In this country, on the other hand, true gout was comparatively rare, and yet Dupuytren's contraction, as far as he was aware, was as frequently met with here as in England. In this disease he had little doubt also that traumatic trouble was responsible for results which were frequently attributed simply to rheumatism.

By way of illustration Dr. Abbe related, in more or less detail, the histories of ten cases of Dupuytren's contraction which had come under his observation, and upon the most of which he had operated. In connection with the histories he exhibited drawings and casts of the deformity existing prior to operation, and also presented two of the patients in person. The most remarkable of these cases was that of a German cloth-cutter, fifty-eight years old, in whom the ring and little fingers of the right hand, and the ring finger alone of the left hand, were affected. He had been a cutter for twenty years, and fifteen years previously the contraction of the left ring finger commenced. Soon afterwards the right ring finger also became affected, and some time after he began to suffer from a "lame back." The pain in the back at length became so constant and severe that he was obliged to give up work. This was three years before he was seen by Dr. Abbe. In the meanwhile he had consulted Dr. Seguin, who believed him to be suffering from organic spinal trouble, and in connection with Drs. Gibney and Amidon applied the actual cautery, the ice-pack, and electricity, both galvanic and static, without producing any appreciable result. At length, on account of the presence of the contractions of the fingers, Dr. Seguin referred the patient to Dr. Abbe, who had already published his first operation, with its successful results, and on the 24th of June, 1882, he performed Adams's operation, making six subcutaneous divisions in one hand and four in the other, dressing antiseptically, and applying straight splints. Even within ten days the man experienced the greatest possible relief from suffering. This patient had now been under observation for nearly two years, and the trouble in the back, as well as the hands, was entirely cured. He was then presented to the Academy, and it was seen that flexion

in the fingers was absolutely perfect, while extension was nearly, though not quite, complete. The other patient presented for examination was a gentleman sixty years of age, who, fifteen years before, had met with a slight cutaneous laceration of the palm of one hand. Within two months afterwards he noticed that a flattened bunch had formed, and subsequently the ring and little fingers of both hands became permanently contracted. About the first of February last Dr. Abbe made twenty subcutaneous cuts in each palm, applied antiseptic dressings, and made pretty full extension for two weeks. In consequence of the nerve irritation thus set up an attack resembling subacute rheumatism had been induced, but this had soon subsided, and very considerable improvement in the condition of the fingers had resulted. It was now eleven weeks since the operation, and on comparing the patient's hands with the plaster casts taken before the latter it was seen that while the fingers could be flexed to a much greater extent than before the cutting, the result was not as yet by any means complete. The trouble, Dr. Abbe explained, was not in the flexing at all, but in the hyperplastic condition generally of the fibrous tissues of the part, which could only be overcome after the lapse of a considerable period of time. The treatment by subcutaneous section and immediate extension, which Mr. Adams had devised, left nothing, he thought, to be desired. He had one suggestion to make, however, and that was, to avoid keeping up too forced extension, as this was liable to set up a considerable amount of irritation, thus illustrating the old aphorism, *ubi irritatio, ibi fluxus*. In concluding the paper he alluded to the treatment adopted by Professor Busch, of Bonn, as described by Madeling, but said he had had no personal experience with it. This operation belongs to the class of open wounds, and consists in dissecting up a triangular flap of skin from the contracted cord in the palm of the hand, and then dividing all the bands of the contracted fascia which can be reached; as the flap thus raised contracts the lower points of the wound may be united with sutures. A light bandage closes the wound; the hand is then kept by the patient in a sling, without the slightest attempt to preserve the extension. Extension-movements with the fingers are only made when the wound has entirely granulated, and then only in a gentle way. At first wood cylinders of various sizes are laid in the hand; later the hand is stretched on a back-splint. Active and passive movements are now to be made in and during the time the hand bath is used for cleansing the wound. The healing of the latter, accelerated perhaps by skin grafting, is accomplished in three or four weeks.

Dr. Alfred C. Post said he believed that he was the first American surgeon to direct attention to this subject, although of late years he had met with but few cases of Dupuytren's contraction. It was a matter of surprise to him that before the time of that surgeon the complaint should have been mistaken for contraction of the tendons, since in the former it made no difference with the fingers whether or not there was a flexed condition of the wrist or elbow, while this was not the case if the tendons themselves were contracted. He had been accustomed to operate by open section, and while he had had no difficulty in extending the fingers, he had found that a considerable interval of time must elapse before flexion could be well restored. All his cases had been of traumatic origin, and had, as a rule, occurred in those who, unaccustomed to manual labor, and with soft hands, had taken up gardening, rowing, or other kind of work in which the palm was exposed to blows or pressure, for purposes of recreation or exercise. The bruising of the palmar fascia, he believed, had always been the essential ætiological factor, and in no instance, so far as he remembered, had the patient been the subject of gout or rheumatism. The reason that the ring and little finger were so frequently affected, he thought, was because the thenar eminence, as it was called, was especially exposed to pressure in the handling of tools, walking with a cane, rowing, etc. In one of his cases he had found it necessary to divide the sheath of a tendon, but the tendon itself he had found entirely unaffected.

Dr. Frank H. Hamilton was of the opinion that in this disease there was a process of atrophy of the areolar tissue, resulting in a condition analogous to that known as *contracture* in tendons rather than an inflammatory one, and this, he believed, explained why such a long time must intervene before the power of flexion could be regained. There was some little doubt in his mind, he continued, whether the origin of the disease was traumatic in all cases. It had been observed that it was especially met with among coachmen in England, and it had occurred to him that the reason of this comparative frequency was that in their occupation this class of men kept their ring and little fingers (which, as had been shown, were almost invariably the seat of the contractions) almost constantly at rest, while they moved their other fingers freely. The persistent disease resulted, therefore, in this condition of atrophy of which he had spoken. On the whole, however, he thought the theory suggested by Dr. Abbe (which certainly did him great credit) was a sound one, and he also remarked that the possible neurotic origin of this affection was a subject which had occupied his own thoughts for a considerable time.

Dr. Sayre expressed similar sentiments, and went on to say that in all the cases that he had ever known of, pain, tingling, or other sensation of discomfort had preceded the deformity, the contraction, as a rule, not coming on until several months after this was first noticed. All the cases were traceable to a traumatism. Dr. Hamilton's suggestion in regard to the atrophy of the parts he thought an important one, and it was on account of this atrophic condition, he believed, that massage and similar manipulations were of so much service in this affection. They ought to be skillfully practiced for half an hour twice each day to restore the vitality and nutrition of the tissues, and in two cases he had by this means secured excellent results without resorting to any operative procedure whatever. The Adams operation in his hands had proved perfectly satisfactory, and it was the only one that he advised. Dr. Sayre also presented a plaster cast of one of his cases.

Remarks were also made by Drs. Weir, Gibney, Amidon, and A. L. Ranney, after which Dr. Abbe closed the discussion. He had no doubt that a great number of cases of Dupuytren's contraction were to be found all over the country, which were supposed to be cases of contracted tendons, and, therefore, irremediable, and said he believed that when the true nature of the affection and the benefit to be derived from the Adams operation came to be more generally understood, the most gratifying results might be anticipated.

After Dr. Post had published his cases, a number of years ago, the subject had in a great measure been allowed to drop out of notice until its recent revival by the English surgeons, and the appearance of Dr. Keen's paper, to which allusion had been made. The slow return of flexion of which Dr. Post and others had spoken this evening was a very noticeable feature of the cases, the fibrous tissues having gradually become so hardened and thickened that it required one or two years after the performance of the operation to restore them to their normal condition. He could not agree with Dr. Hamilton that the process was one of atrophy, but thought it was one of positive inflammation, the neurotic disturbances producing a continued hyperæmia, which finally resulted in hyperplastic thickening of the aponeurotic tissues and the formation of new bands of fascia. He thought that Dr. Sayre was inclined to attach too much importance to massage, which sometimes produced no benefit whatever, as in the case of the patient upon whom he operated eleven weeks ago, where it had been given a thorough trial. At the same time he considered it much better than stretching.

PHILADELPHIA CLINICAL SOCIETY.

STATED meeting, March 28, 1884. The President, DR. HENRY BEATES, JR., in the chair.

DR. DANIEL LONGAKER reported a case of

SUDDEN DEATH IN DIPHTHERIA.

The patient, Mary F., aged six years, was seen first on the afternoon of the second day of the disease. Her temperature was 104.25° F., and the general symptoms were of a decidedly adynamic type. She complained of pain and difficulty in deglutition, and a nasal tone of the voice was noticed. On inspection of the throat congestion and swelling were evident, and a small patch of false membrane was found on the right tonsil. The local trouble continued to grow worse until the fourth day, and was associated with a diminished secretion of urine, in which albumen was found to be present. The membrane was detached on the sixth day, and by the tenth convalescence was established. On the thirteenth day she was seen for the last time. Her pulse was a little accelerated in frequency and still weak. Her appetite was good, and she was sitting up and going down-stairs. Two days later, the fifteenth of the disease, after rising in the morning and feeling quite well, she suddenly fell from the chair from which she was attempting to rise, and expired.

DR. JOS. S. GIBB read a paper on

UMBILICAL HÆMORRHAGE.

In the preliminary remarks he spoke of the neglect of medical writers in omitting this important topic from their works, in spite of the oft-repeated mention of this negligence by individual observers, who, while investigating, have sought in vain in most of the standard works of the day for some account of this accident. Notable exceptions to this are the works of Simpson, Condie, and more particularly Dr. Bedford, of New York. The author spoke of the rarity of the accident, and proved the same by reference to the records of maternity hospitals and foundling asylums, and also by the experience of the older members of the profession, and finally presented a collection of 241 cases, which represented those which have been published since 1752.

The author's case was a female child of a "bleeder" mother. Hæmorrhage began on third day from birth; no single bleeding point was observed; the hæmorrhage was simply a continuous oozing from the bottom of umbilical depression. Several ligatures were applied directly to the cord, and then the ligature en masse, all of which failed to control the hæmorrhage. This was finally accomplished by a solution of the subsulphate of iron painted over umbilicus, and a pledget of cotton saturated with same solution bound fast over umbilicus.

The child suffered considerably from the profuse bleeding, though soon rallied after its cessation. Was strong and healthy when last seen, one month from date of accident.

There were no premonitory or accompanying symptoms. It was simply a spontaneous umbilical hæmorrhage.

The author makes three divisions of the subject: (1.) Hæmorrhage from improper ligation of cord. (2.) Hæmorrhage, the result of traumatism. (3.) Spontaneous hæmorrhage.

The first two received but cursory attention, the cause and remedy being apparent.

The third variety formed the true basis of the paper. He did not believe that any of the so-called premonitory symptoms, namely, colicky pains, jaundice, etc., can be relied on as such, but thought they may occur in otherwise healthy infants, or precede other affections. However, he laid stress on the fact of a hæmorrhagic diathesis existing in either parent, and believed this should make us watchful. He regarded the subjects of umbilical hæmorrhage as those suffering from a general disease, and hæmorrhage the first symptom of this disease. This symptom may occur at any time from a few hours to eight weeks after birth. The next most important symptom is jaundice. Both of these symptoms occur in an equal number of cases.

As regarded the ætiology, the author believed there is a direct relationship between the hæmorrhage and some constitutional condition of infant, which condition may be either hereditary or congenital. The hæmorrhagic diathesis was given a first place in the list of causes. It is not considered absolutely necessary to invoke the aid of the hæmorrhagic diathesis in the parent to establish the existence of this condition in the offspring; in other words, it may be congenital. Attention was drawn to the hæmorrhagic symptoms in these cases, namely, hæmorrhage from bowels, gums, and penis, as proof of this peculiar condition being a strong ætiological factor.

Jaundice was mentioned as forming the favorite ground of most writers on the subject as a causation of umbilical hæmorrhage, but the theories on which this is based were not regarded as substantiated by post-mortem examinations. In but few of the recorded cases were there any indication of a syphilitic or scrofulous taint. Various other minor causative influences were noted, namely, excessive use of alkalies by pregnant women, insufficient food, etc.

In conclusion it was admitted that in the present crude state of our knowledge of umbilical hæmorrhage we are obliged to admit several ætiological factors.

In an analysis of the reported cases there is found to be a strong predisposition on the part of the male to the occurrence of this accident. In 115 cases col-

lected where the sex is mentioned sixty-seven per cent. were males.

The morbid anatomy of the subject is very incomplete, being made up of statistics as to the patency or non-patency of the fœtal openings and vessels, the condition of the liver, and the character of the blood, from all of which no satisfactory conclusions can be drawn. The prognosis of umbilical hæmorrhage was stated as excessively grave. A mortality of eighty-three per cent. in 230 cases. The fatal termination may occur at any period from one hour to eight weeks from commencement of bleeding. In ninety-four cases where the time of death has been stated forty-seven, or fifty per cent., occurred within first forty-eight hours, twenty-five in the first, and twenty-two in the second, twenty-four hours.

The success of therapeutical measures the author believed lies in a proper appreciation of the nature and causes of the disease, and until this is accurately determined umbilical hæmorrhage will continue to resist all well-meant therapeutical resources.

In the present state of our knowledge the author believed that that treatment will be the most successful which consists of local styptics, ligature, etc., combined with such internal hæmostatics and tonics as experience has proven of value in kindred hæmorrhagic affections of adults.

Dr. Charles K. Mills. I have had one very interesting case of umbilical hæmorrhage, which recovered. The subject was the fourth child of perfectly healthy parents, the other three children being healthy. There was no trouble until the third day after birth, when an oozing was found at umbilicus, and the child vomited blood. The cord was examined, and found not bleeding at the extremity. Subsequently styptics were applied without result. The hæmatemesis occurred on three occasions during the following twenty-four hours of occasional hæmorrhage. The bleeding was finally controlled by transfixion with needles, and a half drop of aromatic sulphuric acid administered every two hours. The child recovered, and is now perfectly healthy.

Dr. Hannah T. Croasdale. I have had the opportunity of seeing but two cases of umbilical hæmorrhage. The first was from shrinkage of the cord and great amount of gelatinous material. After the ligature was closely reapplied the bleeding began again from the cut extremity. I then applied Pean's hæmostatic forceps and left them in position twenty hours. In the other case the hæmorrhage was controlled by tightening the ligatures.

Dr. Mary Willits. To the cases mentioned I would add one seen by myself in hospital. The child was a week or ten days old. After considerable hæmorrhage the bleeding was successfully checked by styptics and a compress.

Dr. Henry Beates, Jr. In connection with the hæmatemesis noticed by Dr. Mills, a case seen by myself showed at the autopsy gangrene of the ileum. There was also sloughing at the extremity of the cord.

Dr. Jos. S. Gibb. I am grateful to the members for the relation of their experience with this troublesome affection. The relation of the hæmorrhagic diathesis to it is yet a question. There seem, however, to be two things intimately connected with it, — the hæmorrhagic diathesis and jaundice. The case reported by Dr. Mills would rather support the former theory.

Dr. Albert H. Smith, in closing the discussion, said: I have seen two cases of the kind referred to by the reader of the paper. The first occurred at the end of twenty-four hours after birth in a healthy child. On attention being called to it the ligature was found loose; this was reapplied carefully. On the following morning the nurse again discovered hæmorrhage, and the child died before I could reach the house. This was not a case of neglect or traumatism. The other instance occurred also in a perfectly healthy child forty-eight hours old. The cord was ligated by myself, but I soon found hæmorrhage occurring freely from the tissue around the cord; a large compress of absorbent cotton was applied by means of Seabury & Johnston's plaster, and a teaspoonful of magnesia given internally. The child was saved. In these two cases there were no hereditary tendencies to this form of trouble; no jaundice; no purpura hæmorrhagica in either the mothers or the infants themselves. We have not, so far, reached any reasonable theory of its ætiology. Jaundice seems a coincidence. Great stress has been laid on hæmophylia, but my experience does not bear it out. In a family under my care four out of five died of hæmorrhage, but none showed any tendency to umbilical hæmorrhage. In the autopsies of fatal cases no uniform nor persistent conditions have been found. My cases are somewhat remarkable from the fact that recoveries are rare.

In the treatment we could hardly expect a compress to do much, yet I think this application the best that can be made. A laxative would contribute to lessen blood pressure and act as a revulsive.

I would suggest that hæmorrhage from non-application of a ligature would rarely occur in health if we are to judge by the fact that in Germany they seldom tie the cord. Difficulty may certainly arise from too early ligation. My practice is not to ligate until the cut extremity has ceased bleeding. It is evident that loosening the ligature would be a dangerous experiment in some of these cases.

Dr. Collins exhibited a bullet that had been removed from the anterior nares of a man. It had remained imbedded in the turbinated bones since 1865. An opening in nasal septum remains, produced at time of reception of wound.

Recent Literature.

Illustrations of the Influence of Mind upon the Body in Health and Disease, Designed to Elucidate the Action of the Imagination. By Daniel Hack Tuke, M. D., F. R. C. P., LL. D. Second American from the second English edition. Philadelphia: Henry C. Lea's Son & Co. 1884.

The mind acts upon the body through its threefold states of intellect, emotion, volition. The condition of the mind comprising these states exerts an enormous influence, for good or evil, upon the body with which it is associated — including in this term all sensations, movements, and organic functions.

Physiologically considered, the illustrations range over the effects produced by the action of the nerve corpuscles of the encephalic centres concerned in intellectual, emotional, and violitional states of mind, upon the sensory and motor ganglia, the centre of the sympathetic, and through the outgoing nerves, upon the whole body. The cases brought together in this

volume illustrate the importance of the truth that the mind or brain influences — excites, perverts, or depresses — the sensory, motor, vaso-motor, and trophic nerves, and through them causes changes in sensation, muscular contraction, nutrition, and secretion.

In these words, extracted from the "Introductory" portion, is comprehended the scope of Dr. Tuke's book. That the task he has assigned himself is not an easy one may be readily seen, but he faithfully fulfills his promises, as even a cursory glance at the succeeding chapters will show.

In the first chapter, which deals with General Psychological and Physiological Principles in reference to the intellect, Dr. Tuke shows that Muzer and Hunter a hundred years ago considered the subject of expectant attention, and later (1838) Johannes Müller. The latter, who agreed with John Hunter in regard to the influence of expectation, said: "It may be stated, as a general fact, that any state of the body, which is conceived to be approaching, and which is expected with certain confidence and certainty of its occurrence, will be very prone to ensue as the mere result of that idea."

Elliotson, Laycock, and others investigated the subject of magnetism, and Braid, so familiar to us all of the present day, systematized and repeated on a large scale the experiments which Hunter had previously performed on himself. Dr. Tuke speaks of the importance of Braid's conclusions, and frequently refers to them further on. Dr. Carpenter's exposition of the rationale of the phenomena of mesmerism, so far as they are due to the influence of expectant attention or dominant ideas, is also very valuable.

In section three of the second chapter (which is on the Influence of the Mind on Sensation) some interesting cases of what Dr. Tuke calls *psychical anæsthesia* are given. It is strange, he says (in a foot-note on page 61), "that in all, or nearly all, histories of anæsthetics, *psychical* anæsthetics are not even mentioned. Yet they preceded drug anæsthesia, and to a large extent suggested it. Cloquet removed a woman's breast during the mesmeric sleep, she being able to converse, but insensible to pain, so far back as 1829."

The most interesting cases of operation under the influence of magnetism were those of Dr. Esdaile, who in his book called Introduction of Mesmerism (with the sanction of the Government) into the Public Hospitals of India (second edition, 1856), records 261 rendered painless by this influence. Two hundred of the operations were for the removal of large tumors. There were also eighty-four capital operations in another hospital. Out of the 261 there were fourteen deaths, not dependent, however, on the operation.

On page 114 the Influence of the Intellect on the Blood-vessels is discussed with special reference to stigmata. The singular phenomena of stigmata, when genuine, arise from the mind's influence on the capillary circulation through the vaso-motor nerves. M. Alfred Maury has treated the subject of stigmatization in the most able manner. He mentions cases in which persons have dreamed that they received blows or wounds, and in the morning have found marks of inflammation on the body; "just so with visionaries," he says, "in them, under the power of the imagination, by the concentration of the attention, the blood is directed to the place where they fancy they are affected." M. Maury regards St. Francis d'Assisi as the ancestor of the stigmatized.

The stigmata of Louise Lateau are described, and the conclusions already arrived at in regard to their causation are said to be reaffirmed by M. Warlomont who carefully studied them. "The periodicity of the stigmata is rationally accounted for by the ideas with which they originated having been associated with certain days; and by the weekly direction of thought and feeling in the same channel. The profane are not now allowed to study the case of Louise."

These few extracts from the book of Dr. Tuke give an idea, in a limited manner, of the interesting matters discussed. They fail, however, to give even a faint idea of the strength of treatment, the rich coloring and clearness and skill of style, with which every subject is elaborated.

Dr. Tuke has been known for many years as an able writer, and has of late especially interested himself in trance conditions. The book before us is valuable for what it contains on this subject, which has lately assumed such importance.

As physicians we should constantly bear in mind the importance of the expectant treatment of disease. We probably all suppose that we know almost everything about this treatment now, but Dr. Tuke's book, which we should all own and read, will make the modest among us hang our heads.

The bibliography and general index at the end of the book are excellent.

A Manual of Obstetrics. By A. F. A. KING, M. D. Second Edition; 12mo, 338 pages. Philadelphia: H. C. Lea's Son & Co. 1884.

This manual was designed by the author "to present, in an easily intelligible form, such an outline of the rudiments and essentials of obstetric science as may constitute a good ground-work for the student at the beginning of his obstetric studies." The book is confessedly a compilation, in great part, from the more extensive and classical treatises, such as those of Lusk, Playfair and Leishman. The author has succeeded in producing an epitome, which, if at times concise at the expense of graceful expression, is a reliable and sufficiently comprehensive outline of the subject. Our fear is, however, that manuals like this one will to a great extent displace the large treatises from the student's library: if the knowledge of a manual will enable a student to pass for his degree, he will only exceptionally buy and study the larger works, and will therefore enter his profession with crude and chiefly empirical knowledge, ill-prepared to deal rationally with the problems of medical practice. C. M. G.

Ninth Report of the State Board of Health of Minnesota. Minneapolis: 1883.

The Reports of Local Boards and officers relative to the prevalence of small-pox in 1881 and 1882 occupy a large portion of the report, and show that the disease was generally prevalent throughout the State in those years.

Brief reports follow upon Meteorology, Sanitary Water Survey, Typhoid Fever, Diphtheria, Trichinosis, and Vaccination.

An account of the proceedings of a two days' Sanitary Conference at Minneapolis, in which it is notable that seven out of twenty papers presented on sanitary subjects were written by clergymen.

Medical and Surgical Journal.

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THE MEETINGS OF THE AMERICAN MEDICAL AND OTHER ASSOCIATIONS AT WASHINGTON.

WASHINGTON is to be this week and next the great centre of medical interest, and no other place in the country to-day offers nearly the same advantages and inducements for the annual gatherings of the National Associations. It is easy of access by various lines of railways from all directions; it is central for a very large proportion of the population of the Union; it contains almost unrivaled collections both of books and specimens of general, scientific, and strictly professional interest; it has grown to be a very beautiful city, with environs many of which are charming and replete with historical associations; and in it all American citizens are at home. Moreover, it offers, with the vicinity of Baltimore, in common with places otherwise less favored and more distracting though less diverting, sufficient comfortable accommodation for all who choose to resort to it. If more inducements were needed the easy and rapid escape from a climate still harsh and uncertain, and the pleasing anticipation of a tardy spring, should be a temptation hard to resist for the medical fraternity of New England. There is the choice between going all the way from Boston by water in a little over forty-eight hours, or directly through by rail in about seventeen hours; the dweller in the interior is likely to wisely choose the former, but we can sympathize with a resident on the coast who might think he had had of late enough east wind.

The last days of this week will be occupied by the American Surgical Association, which offers a very large number of papers on a great variety of subjects, and by the new Climatological Association, for which a vast amount of material is waiting over our many degrees of latitude and longitude. Massachusetts Bay alone offers climate enough for a vigorous Association's attention. Next week will be fully occupied by the American Medical Association's meeting, and those of the Medical Editors, of the Council of the Public Health Association, and of the representatives of the State Boards of Health.

We do not doubt these bodies would all find it for their advantage to meet more frequently in Washington than they now do, every fourth year being at present the rule with the American Medical Association.

There is one regrettable feature this year, which threatens to mar the otherwise fair prospects of the meeting of the Medical Association; we refer to the exclusion, not merely from the business meetings but from participation in the Sections as well, of those opposed to the Association's Ethical Code. It is understood that such men are neither to be allowed to read papers, nor to take part in the discussions of other's papers; whether or not this exclusion is to be extended to those also who merely decline to take an oath to support a code is not clear. In either case it is to be feared that what might have been a serene and scientific atmosphere will be disturbed if not poisoned and stifling.

THE DOCTRINE OF EVOLUTION AS APPLIED TO PATHOLOGICAL STATES OF THE NERVOUS SYSTEM.

IN Dr. Hughlings Jackson the Spencerian philosophy has found a strong supporter. The recent Croonian lectures on the Evolution and Dissolution of the Nervous System are a rigid application of Mr. Spencer's principles to the explanation of nervous pathology.

The nervous system in its development is a striking illustration of the general law of evolution, which it is sought to apply to all orders of natural phenomena. This is seen whether we study the nervous system as an ascending development in the animal kingdom, or in the light of human embryology. It is an advance from the simple to the complex, from the relatively undifferentiated to the relatively differentiated, or as Hughlings Jackson expresses it in the lectures above alluded to, from the most to the least organized — that is to say, from the lowest well organized centres up to the highest least organized centres, the latter being the most complex, the most heterogeneous, and the most unstable. The triple conclusion, then, to which Jackson arrives is, "that the highest centres which are the climax of nervous evolution and which make up the organ of mind are the least organized, the most complex, and the most voluntary."

One of the most interesting chapters in Dr. Maudsley's recent work, Body and Will, treats of the future probable disintegration and decline of will power in the human race by a reversal of the solar conditions which have evolved it. Without, however, speculating as to any such possible contingencies, we are continually meeting instances of disintegrations in the delicate nervous plexuses which form the substratum of mind by causes which produce local failures of nutrition. Dissolution is treated of by Dr. Jackson as a process of *undevelopment*, a "taking to pieces" in the order from the least organized, the most complex, and the most voluntary toward the most organized, the most simple, and most automatic. Such "dissolution" (which of course is only partial) is equivalent to the statement, "reduced to a lower level of evolution." Dr. Jackson applies this thought to the elucidation of the phenomena of insanity: "Starting with health, the assertion is that each person's normal thought and conduct are or signify survivals of the fit-

test states of what we may call the topmost layer of his highest centres, the normal highest level of evolution. Now suppose that from disease the normal highest level of evolution — the topmost layer — is rendered functionless. This is the dissolution, to which answer the negative symptoms of the patient's insanity. His positive mental symptoms are still the survival of his fittest states, — are survivals on the lower but then highest level of evolution. The most extravagant actions and the most absurd mentation in insane people are the survival of their fittest states. We need not then wonder that an insane person believes in what we call his illusions, they are his perceptions. His illusions are not caused by disease, but are the outcome of activity of what is left of him; his illusions are his mind."

The above view of abnormal mental action — as being a result of suspension or inhibition of the supreme centres and the unchecked activity of the lower — is now a favorite view with mental pathologists.

Dr. Jackson gives interesting illustrations of his meaning, of which one of the simplest is the effect of alcohol on the brain (and here we take occasion to remark that a similar conception was presented by John Fiske in a work published fifteen years ago): "An injurious agency, say alcohol, taken into the system flows to all parts of it, but the highest centres being least organized 'give out' first and most, the middle centres being more organized resist longer, and the lowest centres being most organized resist longest. Did not the lowest centres for respiration and circulation resist more than the highest do, death by alcohol would be a very common occurrence."

After stating that in the progress of chronic alcoholism gradual involvement of the lower centres takes place, he speaks of local dissolution. Disease may occur in any evolutionary level on one side or on both sides; it may affect the sensory elements chiefly, or the motor elements chiefly. There are local dissolutions of the lowest centres and of the highest centres. In every case of insanity the highest centres are affected, and different divisions of these highest centres are affected, corresponding to different kinds and degrees of insanity.

As examples of local dissolution, Dr. Jackson cites first progressive muscular atrophy. This is dissolution commencing at the bottom of the central nervous system. Here atrophy begins in the most voluntary limb, the arm, affecting first the most voluntary part of the limb, the hand, and spreading to the trunk (the more automatic parts). The wasting of the muscles of the hand has its causal counterpart in atrophy of the first or second dorsal anterior horn, an atrophy which, as its name intimates, is progressive.

He next refers to hemiplegia resulting from destruction of a plexus in mid region of the brain. The arm, the most voluntary limb, suffers the more and longer, and the most voluntary part of the face suffers more than the rest of the face. Although unilateral movements (the voluntary) are lost, the bilateral, which are more automatic, are retained. "Hemiplegia is a clear case of dissolution, — loss of the most voluntary movements of one side of the body, with persistence of the more automatic movements."

His next illustration is paralysis agitans. Here the tremor begins in the hand, affecting the whole arm, finally becoming bilateral. "In an advanced stage paralysis agitans is double hemiplegia with rigidity; is a two-sided dissolution." The same conception is applied to hemilateral epileptiform seizures and to chorea, the great elaborateness of whose movements "points to disease high up, to disease on a high level of evolution."

Dr. Jackson's next example is aphasia, which in many ways illustrates the doctrine of dissolution. In complete aphasia, for instance, there is loss of intellectual (the more voluntary) language, with persistence of emotional (the more automatic) language. In other cases the patient has lost all speech with the exception of "yes" and "no," "the most automatic of all verbal utterances."

Speaking of uniform dissolution, dissolution affecting all divisions of the highest centres, Dr. Jackson chooses as an example delirium in acute non-cerebral disease. This, scientifically considered, he says, is a case of insanity. "The patient's condition is partly negative and partly positive. Negatively he ceases to know that he is in the hospital, and ceases to recognize persons about him. In other words, he is lost to his surroundings; he is defectively conscious. We must not say that he does not know where he is because he is defectively conscious; his not knowing where he is is itself defect of consciousness. The negative mental state signifies, on the physical side, exhaustion or loss of function, somehow caused, of some highest nervous arrangements of the highest centres. We may conveniently say it shows loss of function of the topmost layer of his highest centres. The other half of his condition is positive. Besides his not knowings there are his wrong knowings. He imagines himself to be at home or at work, and acts as far as practicable as if he were; ceasing to recognize his nurse as a nurse he takes her to be his wife. This, the positive part of his condition, shows activity of the second layer of his highest centres, but which, now that the normal topmost layer is out of function, is the then highest layer. His delirium is the 'survival of the fittest' states on his then highest evolutionary level. Plainly he is reduced to a more automatic condition. Being (negatively) lost from loss of function of the highest, latest developed, and least organized, to his present 'real' surroundings, he (positively) talks and acts as if adjusted to some former 'ideal' surroundings, necessarily the more organized."

These lectures will be read with interest by all who desire to investigate the great questions of neuro-psychology.

— The use of mullein as a palliative for the cough of phthisis seems to be meeting with favor in various quarters. The customary form of administration has been a milk decoction of the plant. More recently the smoking of the leaves has been recommended as a more agreeable and effective method of administration.

THE SUBCUTANEOUS USE OF MORPHINE IN ELDERLY PERSONS.

The fact is generally recognized and taught that the very young and the very old are peculiarly susceptible to the toxic effects of anodynes, especially opium. In the case of children, particularly, we have learned the necessity of reducing materially the dose of opium beyond the proportion to the adult dose which the age of the child would indicate for other drugs. We think, however, that many practitioners do not attach sufficient importance to the necessity for caution in the administration of opium to the aged; and in particular that the hypodermic method, useful as it is under certain circumstances, is capable of greatly increasing the risk of an overdose in such cases. One eighth of a grain of morphia given under the skin has caused alarming symptoms in an elderly subject, and we have seen a similar dose apparently cause death in a hospital patient suffering from pneumonia. Instances have occurred within the knowledge of many where a dose as small as one sixth of a grain repeated once in the course of an hour has proved fatal to a feeble and aged subject. What enhances this danger is the fact that symptoms indicative of narcosis are often entirely wanting until the repetition of the dose has been made, when they supervene with alarming suddenness. It is just here that the risk of the hypodermic method is seen. If the drug is in the stomach and symptoms of an alarming nature present themselves there is at least an opportunity to evacuate the residue of the drug before it becomes absorbed. But with the narcotic circulating within the blood-vessels it is beyond our reach. The very elements which have made the hypodermic syringe such a favorite in the hands of the medical profession are those which constitute its chief danger.

True it is that Magendie's solution is convenient to carry about; but so would be morphia granules if we were as accustomed to them. The taste of the latter is no great obstacle to their use; the nausea and other bad after-effects are hardly more frequent after the administration of the drug per os. The desideratum of concealing the dose from the patient is as readily attained by the use of the pill as by that of Magendie's solution. Many physicians finding difficulty in preserving the solution without some antiferment are in the habit of dissolving a weighed powder each time; and surely this is no more convenient than to carry and administer a small pill.

The indications which are especially met by the hypodermic method are quickness of action and the retention of the drug against vomiting. When either of these requirements must be met the subcutaneous injection should be practiced. But for a routine method, and above all in that class of patients who are especially liable to suffer from an overdose of the drug, it seems to us unjustifiable to employ a channel of administration which takes it out of our power to evacuate what may prove an excess of the medicament. Some over-conservative physicians of our acquaintance have gone so far as to throw aside the hypodermic syringe altogether in view of the risks which they have observed in its use. But while this extreme ground seems to us untenable, and while we recognize the great advantages which in certain special cases may accrue from hypodermic medication, we yet feel impelled to protest against making the subcutaneous tissue a regular channel for the administration of morphia, especially in the debilitated and aged.

DR. WILLARD PARKER.

The name of Dr. Willard Parker, who died at his residence in New York on the 25th of April, has long been a household word, and not only in the city where the last forty-five years of his life were spent, but also throughout the country. For eighteen months past he has been suffering from pyelitis and other troubles, but the immediate cause of death was an attack of apoplexy, with aphasia, which occurred April 13th. He was born on the 2d of September, 1800, at Hillsborough, New Hampshire, but when he was five years old his father, who was a farmer of Puritan stock, removed to the family homestead at Chelmsford, Massachusetts; which remained in Dr. Parker's possession up to within a short time before his death. When he was eighteen he began teaching school in order to get the funds necessary to secure a collegiate education, which his parents were unable to provide for him, and four years afterward he entered Harvard; from which he was graduated in 1826. It is related that when he entered college he expected to study for the ministry, but that an incident which occurred in his Freshman year led to a change in his choice of a profession. His room-mate had an attack of strangulated hernia, and he was so much impressed with the skill with which the late Dr. John C. Warren reduced it, thereby affording complete and instantaneous relief, after a local practitioner had failed in the attempt, that he decided to study medicine himself. After graduation he became a student under Dr. Warren, and in 1830 received the degree of M. D. from Harvard; in the meanwhile having served for some time as an interne at the Chelsea United States Marine Hospital. He immediately received the appointment of Professor of Anatomy in the Vermont Medical College, and in the same year (1830) accepted a similar appointment in the Berkshire Medical College, Pittsfield, to which the professorship of surgery was added in 1833. He became Professor of Surgery in the Cincinnati Medical College in 1836, and while still holding this position made a trip abroad, and studied for some time in the London and Paris hospitals. For a period of thirty years, beginning in 1839, he was Professor of Surgery in the College of Physicians and Surgeons in New York; at the expiration of which he resigned this position, and accepted the chair of Clinical Surgery. His success in that city was immediate, both as a teacher and a practical surgeon, and his brilliant operations and distinguished talent as a lecturer soon placed him in the foremost rank of the profession and carried his fame even across the Atlantic.

His exalted character also won the esteem and

veneration of the entire community, and, a public-spirited citizen of the noblest type, he always took an active part in all projects to promote the general welfare. Thus he was scarcely less prominent than the late Dr. James R. Wood in the reorganization of the city almshouse and hospital system in 1845, which resulted in the foundation of Bellevue Hospital, and he was also instrumental, to a large extent, in securing the reorganization of the Health Department, which was previously altogether inefficient. He was closely identified with the temperance movement, and in 1865 he was appointed to succeed Dr. Valentine Mott as president of the State Inebriate Asylum at Binghampton, the first establishment ever founded for the treatment of drunkenness as a disease. In 1870 the degree of LL. D. was conferred upon him by Princeton College. Among his contributions to surgical science were the operation of cystotomy in chronic cystitis, an operation for the repair of rupture of the perinæum and sphincter ani, which involved the division of the coccygeal attachments of the sphincter, and an operation for the cure of abscess of the appendix vermiformis, while he was also the first to direct attention to concussion of the nerves as distinguished from concussion of the nerve centres.

The funeral services were held April 28th at the University Place Presbyterian Church, and, in accordance with Dr. Parker's expressed wish, were of a very simple nature. The church was filled with his medical and other friends, all the various societies to which he belonged being represented, and the pall-bearers were eight grandchildren of the deceased. On the day following the remains were taken for interment to New Canaan, Conn., where for a number of years Dr. Parker had owned a country residence and farm, and spent a considerable portion of his time.

MEDICAL NOTES.

— Etherization by the rectum has been tried with success at the Boston City Hospital in several cases.

— The Senate of Massachusetts has passed a bill requiring life insurance companies within the State to remove the discrimination in tariff which they have heretofore maintained against negroes. It seems improbable that legislation of this sort can effect any good object. The former rules of the insurance companies were in no sense an oppression of the colored race. If the rates were higher to them it was because experience had shown that their expectation of life was not so good as that of whites, and all that remains now for the companies is to decline to accept risks on negroes at all, which is no great gain to the latter. Such laws, if not mere political buncombe, are examples of legislation undertaking to fix the price of commodities, and are not likely to prove particularly successful.

— A case of delirium tremens is reported in the British journals occurring in a boy in Dublin at the age of eight. He stole a quantity of whiskey and drank it, thereby acquiring an attack of delirium tremens, which nearly killed him. He had been a dipsomaniac from the time he was able to imbibe alcohol in any form.

NEW YORK.

— The governors of the New York Hospital Society, which has under its charge the Chambers Street branch, and the Bloomingdale Insane Asylum, as well as the main hospital on Fifteenth Street, have presented their one hundred and thirteenth annual report to the Legislature. From the insane department thirty-six patients, fifteen men and twenty-one women, were discharged during the year cured, and thirty-eight improved, ten of whom bade fair to recover under sufficiently protracted treatment. During the summer and autumn months excursion parties of patients, varying in number from ten to forty, of both sexes, were taken semi-weekly, either to one of the more retired sea-side resorts or to the asylum farm at White Plains, and with the exception of the drowning of a young man while in bathing, which was an unavoidable accident, no untoward event occurred; while the amount of pleasure and healthful benefit derived by the participants was undoubtedly very considerable. Twelve patients, four men and eight women, accompanied by their attendants, were boarded in private families in the country for periods varying from a few weeks to three months, and this also proved beneficial to them. It is stated that ten of the twelve, although well satisfied with their accommodations while away, were glad to return to the institution. Dr. Nichols, the medical superintendent, advises that as there is a great want of available skill in the personal care of the insane during the periods when they are from necessity or choice treated at their homes, a course of from three to six months in institutions for the insane should be added to the curriculum of the training schools for nurses. In furtherance of this idea he offers to give the graduating nurses of the New York Hospital school this extra course, which he thinks would be of benefit to the asylum as well as the nurses. No mechanical restraint was used during the whole year; although it was found necessary to keep one patient, a man of powerful frame suffering from acute mania, secluded most of the time, as the best means to husband his strength and secure the safety of others.

— At a meeting of the Board of Estimate and Apportionment held April 21st $138,710, from the excise fund, was distributed among various charitable institutions in the city. Of this sum the St. John's Guild and Floating Hospital received $2300; the New York Diet Kitchen Association, $1175; the House of Rest for Consumptives, $1094; St. Luke's Hospital, $4312; St. Francis' Hospital, $7656; Mount Sinai Hospital, $4250; the German Hospital, $4541; St. Vincent's Hospital, $1975; the Presbyterian Hospital, $2687; St. Mary's Free Hospital for Children, $1531; the Woman's Hospital, $1852; St. Joseph's Hospital, $1500; the New York Eye and Ear Infirmary, $2208; the New York Ophthalmic Hospital, $1439; the New York Orthopædic Dispensary, $2220; and six of the other dispensaries $1000 each. The Purim ball,

which was given a few weeks since at the new Metropolitan Opera House in aid of the Hebrew Orphan Asylum, netted the very handsome sum of $14,150.

— In the early part of April one of those pretentious and "thoroughly fire-proof" apartment-houses, of unnumbered stories in height, which have recently sprung up like mushrooms all over New York, was almost completely burned up, and although the fire occurred at midday several of the occupants barely escaped with their lives. If it had taken place in the night the loss of life would undoubtedly have been considerable, and as it was the new life-saving scaling ladders (in the use of which a corps of the Fire Department has been specially drilled, and the efficiency of which were on this occasion practically tested for the first time) had to be employed for the rescue of the elevator boy, who was at the top of the house, and whose escape was cut off by the dense smoke. Since then a bill has been passed by the State Senate, entitled An Act to Regulate the Height of Dwelling-Houses in the City of New York, and for the better Preservation of Health in said Houses, which provides that the height of dwellings shall be proportionate to the width of the streets in which they are built, as is the case in Paris, and as Dr. Van der Poel suggested as a requirement by law in a recent report of the Committee on Hygiene of the County Medical Society. A resolution has also been introduced into the New York Board of Aldermen providing that on streets and avenues not exceeding sixty feet in width the houses shall not exceed sixty feet in height, and in streets and avenues exceeding sixty feet in width they shall not be more than seventy feet in height.

Correspondence.

A NEW ANTISEPTIC DRESSING.

Worcester, Mass., *April* 23, 1884.

Mr. Editor, — Since the first week of February last I have been treating compound fractures and operation wounds at our City Hospital with what I suppose to be a new form of dressing. It is certainly simple, its essential elements being but two in number, the "absorbent sheet lint," supplied by Dennison & Co., and a glycerine jelly containing bichloride of mercury. An ounce of gelatine is softened in cold water enough to cover it, then a pound of glycerine is added, and the mixture kept hot until it becomes homogeneous; meanwhile twelve grains of the sublimate is added, and promptly dissolves. This jelly is quite fluid at 110° F., but is firm at ordinary temperatures. Once prepared it can be kept indefinitely in a glass jar.

I closely cover the wound with one or more layers of the absorbent lint dampened with one five-thousandth solution of the sublimate, and over this brush or pour the warm fluid jelly. This instantly fills the meshes of the lint, and makes an air-tight and germ-tight seal to the wound. Outside of this I bind a thick layer of dry sublimated absorbent lint or cotton.

I have found it convenient to prepare, in advance, broad strips of the lint by passing them through the hot jelly; the lint comes out quite heavily charged, and for convenience of handling is laid at once upon a broader strip of dry sublimated lint to which it adheres as it cools. This keeps very well in a tight jar, and for any fairly even surface this makes an excellent dressing, not requiring to be warmed.

The cases reported show that under either form of this dressing a wound may remain aseptic, and heal as well as under the Lister dressing. Under it I have not yet found it necessary to use drainage tubes, as there has been no exudation or suppuration.

I think this will be found a convenient and useful dressing in hospital and private practice. It is simple, light, clean, odorless, comfortable, and, so far as my experience has gone, it is thoroughly antiseptic.

George E. Francis, M. D.

Miscellany.

A CASE OF PUSTULA MALIGNA.

Dr. A. C. Griffin, in the *New York Medical Journal* (April 12th), describes a case of septic poisoning which, in his opinion, was malignant pustule, caused by the bite of a green-bottle fly which had been feeding on a heap of offal. The fly bit the patient on his cheek sufficiently to draw blood, and was killed by a friend. The following day the patient presented himself with a swelling on the cheek at a point corresponding with the bite, the appearances of which are thus described: —

On examination the swelling was found to be of a somewhat circular form, about twenty-five mm. in diameter, and extending through the whole thickness of the cheek, implicating the skin and mucous membrane, to which it was firmly adherent. The swelling was indurated to such an extent as to greatly resemble the ivory hardness of carcinoma. It was extremely sensitive to pressure, and the patient complained of very severe lancinating pains radiating through it. In the centre of this swelling, fifteen mm. above and twenty mm. external to the ala of the nose, was situated a small ulcer, which was covered by a closely adherent layer of pus of a grayish, unhealthy appearance. Surrounding the ulcer was a wide areola of an angry red, erysipelatous hue. The cervical and submaxillary lymphatics were enlarged and tender to pressure. Pulse 120, temperature 103.2° F., tongue slightly coated, violent headache, and complete anorexia. The patient complained of great prostration, excessive nervousness, and an extreme fear of impending death. The ulcer was cauterized with pure carbolic acid, cooling lotions applied, and quinine and alcohol freely administered, with sufficient morphia to relieve pain. On the following day the condition of the patient was much worse, the induration had greatly enlarged in size, extending from the upper lip to the orbital cavity, also implicating the nose, being fully sixty mm. in diameter. The ulcer had also increased by a process of sloughing to a diameter of twenty mm.; the destruction of tissue was quite extensive, as the ulcer extended nearly through the thickness of the cheek. The edges of the ulcer were composed of exuberant granulations, quite protuberant, and bled quite freely from the slightest contact, and from the cavity thus formed there was a profuse discharge of a thin, ichorous fluid of a peculiarly offensive odor. Delirium now supervened. Pulse 140, temperature 104.8° F., tongue heavily coated with a brownish-yellow fur, the bowels were constipated, the cervical lymphatics were very much en-

larged, quite tender to pressure, and threatening suppuration; the patient meanwhile complained constantly of severe pain. Pure carbolic acid was again applied to the ulcer to destroy the exuberant granulations, and to prevent, if possible, further septic absorption. Poultices were applied over the swelling, morphine, quinine, and alcohol were given in increased doses; a mild cathartic was also administered. The patient grew progressively worse until the sixth day from the receipt of the bite, when his condition was one of extreme prostration, with very little hopes of recovery. The treatment had consisted of thorough cauterization of the ulcer each day, poultices to the swelling, and the free use of alcohol and quinine, with sufficient morphine to allay the pain. By the aid of this free stimulation the patient was enabled to overcome the virulence of the septic inoculation, and on the seventh day his condition had slightly improved. The induration became somewhat softer and slightly diminished in size, the ulcer began to assume a healthy appearance, normal granulations sprang up covered with laudable pus, and the areola had become less vivid in color. From this time on the case progressed favorably, the induration of the cheek and the swelling of the glands subsided, the cavity left by the ulcer filled up and healed, leaving a moderate-sized cicatrix, and the patient's general condition advanced steadily toward its normal standard.

Though the clinical evidence in this case seems to point to malignant pustule, no examination was made for the presence of the bacillus, nor was any experiment made by inoculation. In view of the comparative infrequency of this disease in this country it is to be regretted that this confirmatory evidence was not obtainable.

A similar case, also resulting from the bite of a fly upon the cheek, was reported in the *Gazette des Hôpitaux*, No. 102, having occurred in the service of M. Mollière at the Hôtel Dieu at Lyons. Energetic treatment by thermo-cautery and the injection of the swollen parts with twenty per cent. solution of carbolic acid caused a slough which was complete in a week and was followed by rapid healing. Here the blood and serum in the vicinity of the pustule showed a few filaments of the bacillus anthracis, and an inoculation practiced therewith produced death in a few hours with signs of specific gangrenous infection.

THE MORAL BEARINGS OF ARTIFICIAL IMPREGNATION.

THE French journals have been commenting freely during the past few weeks on a decision rendered by the Tribunal of Bordeaux in regard to a case of artificial impregnation. A physician had employed this device with the consent of a childless couple, but unsuccessfully. Not being paid, he brought suit for the amount of his fee, and detailed in court the steps of the treatment. This evidence the court held to be in contravention of the requirements of professional secrecy, and at the same time went a step further and pronounced against the performance of artificial fecundation as being repugnant to natural law, and capable in cases of abuse of causing a real social danger. On the former point, the violation of professional confidence, the general opinion seemed to support the decision (which was confirmed on appeal by the Tribunal of the Seine), but on the latter point the Society of Legal Medicine appointed a committee to prepare a report. This report was presented by Dr. Leblonde, and while condemning the attempts of irregular practitioners to attract sterile women by means of advertisements of an operation for their relief, it indorses the operation when performed by an honorable physician who resorts to it only under well-determined conditions, and with discretion, as a perfectly acceptable device, which, instead of creating a social danger, may conduce to the extension of the family without in the least offending modesty.

Reviewing the conditions essential to impregnation, the report says that when the two necessary elements are both existent and of normal quality a mechanical obstacle may interfere with their contact, due to malformations of the male or female organs of generation, such as hypospadias, uterine deviations, atresia cervicis, etc., and that in such cases artificial impregnation is equally legitimate with other surgical measures for the overcoming of the obstacle. For this operation he quotes as authority Courty, Pajot, De Sinéty, Lutaud, Eustache, Marion Sims, Gaillard Thomas. The method of Pajot, in the opinion of the reporter, is preferable on the ground of simplicity and decency. Of the success of the manœuvre nothing is said in the report, but the implication is made that the accomplishment of the desired result is an easier matter than we are inclined to think has been the experience of American gynæcologists.

The conclusion of the report was as follows: "So far from condemning artificial fecundation, as does the Tribunal of Bordeaux, we are disposed to encourage it as tending to perpetuate the species and furnishing to the family joys which it could not otherwise experience. However, we are of the opinion that the operation ought not to be attempted except at the express request of the persons interested, and after assurance of the quality of the seminal fluid furnished by the husband."

To this the Society added by unanimous vote this amendment: "An honorable physician ought not to take the initiative in proposing the operation of artificial impregnation, but neither ought he to refuse to practice it at the request of the interested persons."

THE CRYPTA SYPHILITICA.

WE wonder how Professor Hayem will feel when in *Gaillard's Monthly*, in an article by Ephraim Cutter (reprinted in the *Therapeutic Gazette*, and in pamphlet form by a prominent pharmacist), he sees his *hæmatoblasts* depicted as "embryonal forms of vegetative spores" of the "crypta syphilitica!" It is added that "in the diagram they are immovable, but in the blood just removed from the stream of a syphilitic, and viewed under a one-sixteenth-inch first-class Tolles' immersion objective they appear as auto-mobile globes, active with life, skurrying hither and thither with the ceaseless, playing motions of protoplasmic life." Marvelous are the powers of Stillingia! Professor Hayem will be pleased to learn that these little highly refractive bodies, so well described in his treatise on the blood, can be entirely removed by a course of McDade's syrup!

— "Doctor," said the grateful patient, seizing the physician's hand, "I shall never forget that to you I owe my life." "You exaggerate," said the doctor mildly, "you only owe me for fifteen visits; that is the point which I hope you will not fail to remember."

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 19, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	618	231	13.44	14.88	2.08	4.00	2.88
Philadelphia	927,995	426	147	10.81	15.64	—	4.14	4.37
Brooklyn	644,526	254	104	15 21	14 81	1.95	3.92	2.73
Chicago	632,100	236	127	19.74	10.50	4.62	6.72	2.52
Boston	423,800	189	53	9.54	14.31	.50	3.71	.53
Baltimore	408,520	142	48	16.89	10.56	2.11	1.41	1.41
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	121	—	11.62	12.45	2.49	.83	2.49
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	79	28	15.12	18.90	1.26	—	6.30
Pittsburg	180,000	65	28	13 86	15.38	—	10.78	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	35	—	14.30	11.44	11.44	—	2.86
Nashville	54,400	21	9	19.04	9.52	—	4.76	—
Charleston	52,286	—	—	—	—	—	—	—
Lowell	71,447	18	4	5.55	11.11	—	—	—
Worcester	69,442	26	17	19.25	3.85	—	15.40	—
Fall River	62,674	19	7	10.32	15.78	—	—	5.26
Cambridge	60,995	17	6	17.66	11.77	—	11.77	—
Lawrence	45,516	17	7	5.88	5.88	—	—	5.88
Lynn	44,895	6	4	16.66	16.66	—	16.66	—
Springfield	38,090	7	1	28.56	14.28	—	14.28	—
Somerville	31,350	9	3	—	11.11	—	—	—
Holyoke	30,515	—	—	—	—	—	—	—
New Bedford	30,144	7	2	28.56	14.28	—	14.28	—
Salem	29,503	—	—	—	—	—	—	—
Chelsea	24,347	7	4	14.28	14.28	—	14.28	—
Taunton	22,693	8	0	—	12.50	—	—	—
Gloucester	21,400	3	2	33.33	—	—	33.33	—
Haverhill	20,905	4	1	—	25.00	—	—	—
Newton	19,421	4	3	12.50	—	—	—	—
Brockton	18,323	6	0	—	16.66	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	5	0	—	60.00	—	—	—
Fitchburg	13,433	6	0	—	50.00	—	—	—
Seventy-nine Massachusetts towns	315,596	69	12	5.80	11.60	—	4.35	—

Deaths reported 2424 (no reports from St. Louis, New Orleans, Buffalo, Milwaukee, and Providence): under five years of age, 848; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 368, lung diseases 371, consumption 352, diphtheria and croup 101, scarlet fever 64, diarrhœal diseases 41, typhoid fever 36, measles 24, whooping-cough 23, erysipelas 16, malarial fevers 11, cerebro-spinal meningitis 10, puerperal fever eight, typhus fever one. From *typhoid fever*, Philadelphia 12, Chicago and Boston four each, New York, Baltimore, and Cincinnati three each, Brooklyn two, Pittsburg, Nashville, Lowell, Springfield, and New Bedford one each. From *measles*, Philadelphia five, Baltimore eight, New York and Chicago four each, Brooklyn three. From *whooping-cough*, New York seven, District of Columbia three, Brooklyn, Chicago, Boston, Baltimore, and Cincinnati two each, Pittsburg, Worcester, and Brookline one each. From *erysipelas*, New York seven, Brooklyn four, Boston two, Philadelphia, Baltimore, and Newton one each. From *puerperal fever*, Brooklyn and District of Columbia two each, Philadelphia, Chicago, Boston, and Nashville one each. From *malarial fevers*, New York five, Brooklyn four, Baltimore two. From *cerebro-spinal meningitis*, Chicago two, New York, Baltimore, Cincinnati, District of Columbia, Nashville, Fall River, Cambridge, and Fitchburg one each. From *small-pox*, Philadelphia, Chicago, and Cincinnati one each. From *typhus fever*, New York one.

One case of small-pox was reported in Cincinnati; scarlet fever 58, diphtheria 19, typhoid fever two, and measles one.

In — cities and towns of Massachusetts, with an estimated population of — (estimated population of the State 1,955,104), the total death-rate for the week was — against — and — for the previous two weeks.

In the 28 great towns of England and Wales, with an estimated population of 8,762,354, for the week ending April 5th, the death-rate was 22.7. Deaths reported 3809: acute diseases of the respiratory organs (London) 357, whooping-cough 184, measles 143, scarlet fever 75, fever 41, diarrhœa 37, diphtheria 28, small-pox (London 13, Birmingham three, Liverpool and Sunderland two each, Newcastle one) 21. The death-rates ranged from 14.3 in Brighton to 36.2 in Oldham; Leicester 16.5; Birkenhead 17.8; Bradford 18.9; London 21.9; Sheffield 22.4; Birmingham 23.3; Liverpool 23.6; Newcastle-on-Tyne 24.5; Nottingham 26.9; Leeds 28.1; Manchester 30.4. In Edinburgh 23.7; Glasgow 26.2; Dublin 29.6.

For the week ending April 5th, in the Swiss towns, there were 36 deaths from lung diseases, consumption 33, typhoid fever 25, diphtheria and croup 18, diarrhœal diseases 13, whooping-cough eight, scarlet fever two, erysipelas two, measles one. The death-rates were, at Geneva 20.4; Zurich 19.7; Basle 21.7; Berne 33.3.

The meteorological record for the week ending April 19th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
April, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 13	30.091	42	55	38	65	52	76	64	NW	E	W	11	12	6	C	C	C	—	—
Mon., 14	30.116	43	62	36	71	78	77	75	NW	E	SW	3	8	6	C	C	C	—	—
Tues., 15	29.931	46	55	39	90	100	100	97	SE	E	S	4	14	13	F	R	R	—	—
Wed., 16	29.671	57	69	49	100	60	96	85	SW	S	W	6	10	7	O	C	O	—	—
Thurs., 17	29.821	48	58	45	98	85	100	94	E	NE	NW	4	12	10	O	O	R	—	—
Fri., 18	29.908	42	48	40	99	100	99	99	N	NE	N	11	17	4	O	R	O	—	—
Sat., 19	29.969	42	44	41	100	97	100	99	NE	NE	NW	13	9	6	R	O	O	—	—
Mean, the Week.	29.938	46	56	41				83										49.48	1.69

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM APRIL 19, 1884, TO APRIL 25, 1884.

HOFF, JOHN VAN R., captain and assistant surgeon. To be relieved from duty at Alcatraz Island, Cal, and to report to the commanding officer at Fort Mason, Cal., for duty as post surgeon. Paragraph 3, S. O. 45, headquarters Department of California, April 16, 1884.

PORTER, JOSEPH Y., captain and assistant surgeon. Granted leave of absence for two months, to take effect about May 5, 1884. Per S. O. 38, headquarters Division of the Missouri, April 19, 1884.

BIART, VICTOR, captain and assistant surgeon. Granted leave of absence for one year on surgeon's certificate of disability, with permission to leave the Division of the Missouri. Paragraph 2, S. O. 91, A. G. O., April 19, 1884.

LA GARDE, LOUIS A., captain and assistant surgeon. Granted leave of absence for one month, with permission to apply for two months' extension. Paragraph 1, S. O. 91, A. G. O., April 19, 1884.

OFFICIAL LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS UNITED STATES NAVY FOR THE WEEK ENDING APRIL 26, 1884.

HIBBETT, C. T., passed assistant surgeon, ordered to United States Iron Clads, James River, Va.

AULICK, H., passed assistant surgeon, detached from Iron Clads and ordered to the New Hampshire.

DIXON, W. S., passed assistant surgeon, detached from the Hartford and ordered to the Coast Survey Steamer Hassler.

TERRILL, F. H., passed assistant surgeon, detached from the Hassler and ordered to the Hartford.

WISE, J. C., surgeon, detached from the New Hampshire and placed on waiting orders.

SCHOFIELD, W. K., medical inspector, appointed medical inspector on active list.

NASH, F. S., passed assistant surgeon, detached from Laboratory and ordered to the Alert (Greely Relief Expedition).

HALL, J. H., passed assistant surgeon, ordered before Retiring Board.

NELSON, H. C., medical inspector, placed on retired list.

BATTLE, S. W., passed assistant surgeon, placed on retired list.

TERRILL, F. H., passed assistant surgeon, resigned.

MURRAY, J. M., passed assistant surgeon, ordered to the Minnesota.

AMERICAN CLIMATOLOGICAL ASSOCIATION. — The first annual congress of the American Climatological Association will meet at the hall, northwest corner of Sixth and F Streets, Washington, D. C., May 3 and 5, 1884. Sessions ten A. M. and three P. M. Papers: (1.) Opening Address, F. I. Knight, M. D., Boston, Mass. (2.) The Ætiology of Pulmonary Phthisis, B. F. Westbrook, M. D., Brooklyn, N. Y. (3.) Dryness and Elevation the most Important Elements in Climatic Treatment of Phthisis, Charles Denison, M. D., Denver, Col. (4.) Some Observations on the Diagnosis of Pulmonary Diseases, D. N. Kinsman, M. D., Columbus, Ohio. (5.) The Effects of Humidity on the Cause and Course of Diseases, W. H. Geddings, M. D., Aiken, S. C. (6.) The Effects of Sea-Air on Diseases of the Respiratory Organs, Boardman Reed, M. D., Atlantic City, N. J. (7.) The Use of Compressed and Rarefied Air, as a Substitute for Change of Climate, in the Treatment of Pulmonary Diseases, J. Solis Cohen, M. D., Philadelphia, Penn. (8.) The Constituents of Climate and their Relation to Disease, J. Hilgard Tyndale, M. D., New York. (9.) The Relation of Laryngeal to Pulmonary Diseases, F. H. Bosworth, M. D., New York. (10.) The Climate of Large Cities Dangerous to Consumptives, Frank Donaldson, M. D., Baltimore, Md. The above is a list of the papers already reported to the Committee. Others have been promised, but the titles have not been sent in.

AMERICAN SURGICAL ASSOCIATION. — The exercises of the annual meeting of the American Surgical Association will be held in the lecture hall of the National Museum (Smithsonian Grounds), Washington, D. C., Wednesday, Thursday, Friday, Saturday, April 30, May 1, 2, and 3, 1884, from eleven A. M. to four P. M. The profession is cordially invited to attend the sessions.

SUFFOLK DISTRICT MEDICAL SOCIETY. SURGICAL SECTION. — The last regular meeting of the Season will be held at 19 Boylston Place on Wednesday evening, May 7th, at 7.45 o'clock. Communications: —

Cases of Strangulated Hernia, Inguinal and Umbilical. Dr. A. T. Cabot.

Cases of Unilateral Atrophy, and

A Case of Strangulated Umbilical Hernia. Dr. H. L. Burrell.

S. J. MIXTER, *Secretary*, 180 Marlborough Street.

APPOINTMENT. — William H. Welch, of New York, has been appointed Professor of Pathology in Johns Hopkins University.

DEATH. — In Roxbury, Mass., April 24, 1884, William Henry Campbell, M. D., M. M. S. S., aged fifty-two years.

BOOKS AND PAMPHLETS RECEIVED. — Post-Nasal Catarrh and Diseases of the Nose causing Deafness. By Edward Woakes, M. D. Illustrated with Wood Engravings. Philadelphia: P. Blakiston & Co. 1884.

A Course of Instruction in Zoötomy (Vertebrata). By T. Jeffery Parker, B. Sc. Lond., Professor of Biology in the University of Otago, New Zealand. With seventy-four Illustrations. London: Macmillan & Co. 1884.

National Board of Health. Remarks before the Committee on Public Health of the House of Representatives . . . in Refutation of Charges made against the Board by Supervising Surgeon-General of the Marine Hospital Service. Washington, D. C.

Original Articles.

MALIGNANT PUSTULE.[1]

BY W. S. JANNEY, M. D.

My remarks to-night will be on the clinical history of four cases of malignant pustule, which have come under my observation at various times during thirty years of practice.

The synonyms of malignant pustule, as given by various authors, are: Contagious carbuncle, malignant carbuncle, anthrax, and charbon; other names are used to designate the more diffused and general forms of the disease.

It is defined to be a specific contagious disease, communicated to man from disease of horned cattle, horses, sheep, and other herbivora, and known as splenic fever, and due to the presence in the system of the bacillus anthracis of Cohen, or bacteridium of Davaine. The local or external form of the affection, malignant pustule proper, is a carbunculous swelling having specific characters, attended with more or less intense surrounding inflammatory œdema; constitutional symptoms may be slight or severe, and the disease is often fatal.

The symptoms and course of malignant pustule vary greatly with the form of disease. Authors describe at least three distinct forms: —

First, malignant pustule or carbuncle proper, the form from which the names of charbon and anthrax are derived; usually it occurs as a primary lesion due to direct inoculation; the seat is either on the face, neck, hands, or arms, those parts most exposed to inoculation.

Second, malignant anthrax, œdema, without definite pustule, corresponds in the main with malignant pustule proper. The eyelids are the parts most frequently affected, but it may occur elsewere.

Third, internal anthrax; differs greatly from external, and may be general, having no special lesion or accompanied by local affection; usually pulmonary or gastro-intestinal.

The cases that I wish to report to-night come under the form of malignant pustule proper.

Mr. H., residing in Hopewell township, Mercer County, N. J., a farmer, aged sixty; previous to the attack general health good. On the morning of September 20, 1866, Mr. H. noticed a small pimple on his right cheek, immediately over the infra-orbital foramen. During the day it was slightly painful, and during the night the apex became vesicular, with great itching and burning, which continued to increase until the following morning, when I first saw him. The face presented the following appearance: a small pustule, one eighth inch in diameter, situated as above stated, with a denuded apex of a dark-brown color, and an areola of one half an inch in diameter, of a dark red color, surrounding the base of the pustule, and not sensitive to touch; pulse 78, respiration 20, tongue slightly coated, and bowels constipated. During the day the temperature increased. Pulse in the evening 100, respiration 22. Side of face up to this time had become very much swollen, with red streaks extending to the neck; slightly delirious; tongue dry. Free crucial incisions were made in the pustule. Delirious through the night of the 21st. On the morning of the 23d respiration was 30, pulse 130, tongue brown and dry; the cheek was of dark gangrenous color, extending to the lower margin of lower jaw, and also backward, involving the parotid region and right ear, to near the posterior median line of the neck; dark-red streaks extending over the shoulder to the right arm; patient becoming rapidly comatose, and died at two P. M. on the 23d, being fifty-eight hours after first noticing pimple on his face. The inflammation and œdema did not extend over the median line of the face or back of the neck.

The second case that came under my care was: —

Mrs. R., residing at her country seat in the suburbs of this city, thirty-two years of age, married, the mother of three healthy children, and of previous good health. She noticed September 17, 1876, a small pimple on the right side of the face, one half inch below the lower lip, and slightly to the right of the median line. From her description of how it commenced, she informed me that her first intimation of anything being the matter was a persistent itching sensation, and on rubbing it she felt a small circumscribed induration, which was in the skin, and was not noticeable. She continued rubbing it to allay the itching; in a few hours she noticed a slight elevation of the skin, conical in form, and the size of an ordinary pin-head, which increased during the day. Slept well during the night, and on the following morning, the 18th, she noticed the papule had increased in size, and was vesicular, containing a dark-colored fluid. The itching continued, and on rubbing it she ruptured the vesicle, and from that time she had a burning, itching pain in the pustule. I saw Mrs. R. on the morning of the 18th of September; she was sitting in her room and did not consider herself sick; had slight headache; was nervous, and spoke of a premonition of impending sickness or calamity. She had an anxious expression; retraction of the eyelids, giving her a staring expression. Tongue slightly coated with a light yellow coat; temperature 99°, respiration normal, pulse 80; constipated, and urine scanty; on her face, half an inch below the right side of the lower lip, and half an inch to the right of the median line, was a pustule of the size of a split pea, with an indurated base half an inch in diameter, of a dark-red color. The apex of the pustule was denuded of cuticle, and of a dark-brown color, not sensitive to pressure; no lines or streaks of inflammation extending from the pustule; no œdema of face. On the evening of the 18th temperature was 100, pulse 110, respiration 22; tongue coated and dry; streaks or lines of a dark red color, extending from the right side of pustule in a line of the inferior maxilla, curving upwards towards the right ear; right half of lower lip swollen, and of a dark-red color, which, on pressure, imparted a nodulated condition; dark-red streaks extending from the lip, curving upwards to the integument over the malar process. The skin and underlying tissues between the base of the pustule and the indurated lip retained their normal color and consistence.

Complained of severe lancinating pain over right half of face and shoulder. Morning of the 19th, temperature 101½, pulse 124, respiration 24; tongue dry; sordes on teeth; the areola around the pustule not so red; no discharge from pustule; dry and dark in color. The lower right half of lip showing dark gangrenous patches; right half of upper lip swollen, of a dark purple color, hard and nodulated. The right half of the face,

[1] Read before the Philadelphia County Medical Society, April 9, 1884.

forehead, and right ear swollen, œdematous, and of a mahogany color. The right side of neck swollen, with red streaks extending to the shoulder and arm. Complains of lancinating pains in right arm, fore-arm, and hand; also of scalp.

I saw her again on the evening of the 19th, when all of the above symptoms were aggravated. The right half of the face and right half of forehead, scalp, neck, and arm presented the appearance of rapid extension of gangrene. The lower half of right lip completely gangrenous; upper lip also. The fauces, tonsils, and pharynx not affected; lancinating pains in right mammary region, abdomen, and lower extremities. There was no redness, œdema, or other indications of the disease extending to the mammary region, abdomen, or right lower extremity. Skin normal in color; the slightest touch of the integument over the right side of the thorax, thigh, and leg produced the most excruciating pain, and not upon the left; became comatose during the night of the 19th. On the morning of the 20th, gangrene had extended during the night to the shoulder and arm, as far as the elbow, and to the median line of the neck posteriorly; had stertorous breathing; temperature 108, respiration 30; died at twelve o'clock, seventy-two hours after she had first noticed the papule.

The third case:—

Mrs. H., residing in this city; was called to see her October 20, 1878; thirty years of age, and of previous good health; mother of five children. Found her dying. She had been under the treatment of another physician. The history of the case was obtained from her husband. Four days previous to her death she noticed a small papule on the right side of her chin; on the following night the lower lip began to swell, extending to the median line, and next day involving the right half of the upper lip and extending over the left side of the face; complained of lancinating pain over right side of face, head, and neck; was five months pregnant, aborted on the third day, became comatose on the night of the third day, and died on the morning of the fourth day. When I saw the case, the lower and upper right half of the lips were gangrenous; between the pustule and lower lip an area of healthy tissue intervened, similar to case second.

The fourth case occurred in this city:—

Mr. P., residing at 2140 Park Avenue, a wool merchant, aged twenty-four, and of previous good health, who had been in Colorado, purchasing wool, returned from Colorado, October, consulted me October 3, 1883, for a cough, the result of a cold. On examination I observed on the face, one inch below the right half of the lower lip, near the median line, a small papule, not larger than a small pea, with an areola half an inch in diameter, of a pale pink color. I directed his attention to it, and he remarked that it was nothing but an ordinary pimple. My experience with the cases reported led me to suspect that it might be the beginning of a malignant pustule. As he had been handling wool in Colorado I stated my suspicions, and asked him to call next morning, incised the papule, and applied a fly-blister. He attended to his usual business on the 3d of October, and called at my office on the morning of the 4th. The papule had not increased in size. The areola was of a much darker color, but not increased in area. I removed the vesicated skin from the papule, and applied another blister. Had headache, temperature 99, and respiration 20. I felt almost convinced that I had to encounter another case of this dreadful disease. By much persuasion he permitted me to incise the pustule freely; was requested to go home, and told that I would see him in the evening.

On the evening of the 4th temperature 100°, pulse 95, respiration 20; no perceptible change in the pustule; red lines extending outward from left side of pustule, curving upwards over the face; lower right half of lip swollen and hard, with a band of hardened tissue extending from the left angle of the mouth outward for two inches; the face œdematous.

Incised the lower lip transversely from the median line to the angle on the line of junction of the skin and mucous membrane to the depth of one inch, and applied pure carbolic acid to the wound; also injected pure carbolic acid into the pustule; applied a poultice of flaxseed, tar, and tinct. iodine — three parts of meal, one part of tar, two dr. of tinct. iodine.

Morning of the 5th, inflammation around pustule less; lower lip more swollen, and presenting a gangrenous slough; left half of upper lip swollen and presenting the same appearance as lower lip twelve hours previous. Temperature 101, pulse 115, respiration 22; face more œdematous, and dark-red lines extending from the lips upwards and backwards to the zygoma and left orbit. I incised upper lip, and applied carbolic acid and poultice; injected carbolic acid into the tissues near the angle of the mouth; applied lint wet with sol. act. lead to the face. Evening of the 5th, temperature 102½, pulse 124, respiration 24; the œdema of the face has not extended beyond the limits in the morning; tissues of upper lip of darker color; lower lip sloughing; pustule and surrounding areola improving in color; slight discharge of pus from pustule.

Morning of the 6th. Passed a very restless night. Temperature 102, pulse 120, respiration 20. Tissues of lower and upper lip sloughing; removed with forceps and scissors a great portion of the slough of the lower lip; continued to apply carbolic acid. The œdema and color of the face remained in much the same condition of previous day. Evening of the 6th, temperature 103, pulse 130, respiration 24. No perceptible change in the pustule, lips, or face since morning.

Morning of the 7th, temperature 102⅔, pulse 128, respiration 22; œdema of face diminished; pustule and lips discharging pus. Evening of the 7th, temperature 103⅜, pulse 135, respiration 26; has been chilly during the day, and is in a profuse sweat at six P. M.

Morning of the 8th, temperature 102⅔, pulse 126, respiration 22; sloughing of upper lip profuse. Evening, temperature 104, pulse 140, respiration 30.

Morning of the 9th, temperature 103, pulse 138, respiration 28; entire slough of lower lip removed, presenting a healthy granulating surface. Upper lip sloughing; removed from angle of mouth a large slough; face less swollen and less discoloration. Slightly delirious during the previous night. Evening, temperature 105, pulse 142, respiration 30.

Morning of the 10th, temperature 102, pulse 130, respiration 28. Night, temperature 103, pulse 130, respiration 34. Condition of face improved; slough removed from upper lip.

Morning of the 11th. Passed a restless night; had slight chill followed by a profuse perspiration; temperature 103⅕, pulse 140, respiration 28; tongue dry, and sordes on teeth; bowels loose; redness and œdema of face rapidly disappearing; the lips presenting healthy

granulating surfaces; swelling and fluctuations below the symphysis of lower jaw; punctured, and half ounce of pus evacuated. Evening, temperature 105½, pulse 130, respiration 30.

Morning of the 12th, temperature 102, pulse 130, respiration 28; profuse perspiration through the previous night. Evening, temperature 103⅜, pulse 140, respiration 28.

Morning of the 13th, temperature 100, pulse 106, respiration 24. Swelling with fluctuation over infra-orbital foramen. Punctured, and evacuated one ounce of pus. Evening, temperature 103, pulse 140, respiration 30.

Morning of the 14th, temperature 99, pulse 110, respiration 22. Profuse perspiration, alternating with chilliness during the previous night and day, and complains of pain and soreness of right leg. On examination found an area of dark-red color, one inch wide and two inches long, situated on the outside of the anterior border of the tibia, at the junction of the middle with the upper third of the bone. Introduced bistoury to the depth of one inch and a half, without reaching pus.

Morning of the 15th, temperature 100⅜, pulse 132, respiration 24; passed an uncomfortable night; had profuse perspiration; wounds of lips improving. Evening, temperature 104, pulse 140, respiration 32.

Morning of the 16th, temperature 103, pulse 140, respiration 30. Severe chill during the night, followed by severe lancinating pain in lower right pleura. The swelling in the leg continued, and a deeper incision, extending between the tibia and fibula, gave exit to three ounces of dark-colored pus. Evening, temperature 105, pulse 160, respiration 36.

Morning of the 17th, temperature 102 3/10, pulse 128, respiration 30; had alternate chilliness and perspiration during the night. The acute pain in the side relieved, with a dull aching pain ensuing; slight cough on full inspiration. Percussion revealed dullness over the lower lobe of right lung. Evening, temperature 104⅜, pulse 140, respiration 36.

Morning of the 18th, temperature 104¼, pulse 128, respiration 30; expectorates frothy mucus, tinged with blood; continues to have profuse perspiration several times a day, so that his clothing is continually wet.

Morning of the 19th, temperature 101, pulse 126, respiration 28. Expectoration of bloody sputa increased. Perspiration continuing. Abscess in leg discharging unhealthy dark-colored pus. Evening, temperature 103, pulse 132, respiration 32.

Morning of the 20th, temperature 101, pulse 124, respiration 28. Expectoration of a dark-brown color. Less dullness on percussion. Abscess still discharging pus of a lighter color. Evening, temperature 103⅜, pulse 132, respiration 30.

Morning of the 21st, temperature 100, pulse 120, respiration 22. Expectoration less and of lighter color. Urine examined; quantity thirty ounces daily, and slightly albuminous. Evening, temperature 102⅜, pulse 128, respiration 26.

Morning of the 22d, temperature 101, pulse 124, respiration 26. Expectoration less. Less dullness over lung. Evening, temperature 103, pulse 130, respiration 30. . . .

Morning of the 25th, temperature 99, pulse 120, respiration 22. More air entering right lung. Less cough and expectoration. Otherwise no improvement. Evening, temperature 102⅜, pulse 128, respiration 30. . . .

Morning of the 28th, temperature 99⅜, pulse 124, respiration 24. Less cough and expectoration, and profuse perspiration at intervals of four to six hours. Evening, temperature 103, pulse 132, respiration 30.

Morning of the 29th, temperature 99⅛, pulse 120, respiration 22. With the exception of temperature, the patient appears to be improving. Evening, temperature 103, pulse 130, respiration 24. . . .

On the night of November 1st he had a severe chill, after which the temperature rose to 106°, followed by severe pain in left thorax, which proved to be the beginning of another attack of pleuro-pneumonia, which passed through all the stages that I have just related in the attack on the right side, with temperature, pulse, and respiration during the course of the disease a counterpart of the first attack.

On the morning of the 10th of November, temperature 102½, pulse 130, respiration 28. Patient continued to improve from this date. A slight cough with expectoration of light-colored sputa continued until December 28th, with occasional attacks of perspiration; the temperature was taken until the 28th of December.

The characteristic symptoms of two of these cases were alike in several respects. The locations of the pustules were both on the right side of the face, and located at the same place. The intermediate integument between the pustules and lips was not affected by the disease in either case. The inflammation or extension of the disease appeared to be from the right side of the pustules along the integument covering the basilar portion of the inferior maxilla, to near the angle of the jaw, and then curving upwards over the face along the anterior border of the masseter muscle.

On the second night, or twenty-four hours after pustules were noticed, and twelve hours after red streaks or lines extended along the lower margin of jaw, and then the lower half of the lips became affected, and twelve hours after the upper lip became affected in both cases, and then the right half of the face, forehead, and scalp in the case of Mrs. R., and the face of Mr. P. became œdematous.

From the observation of these cases it appears that the disease may be divided into four periods or stages: first, the period of incubation, which may be from a few hours to fourteen days, with no prodromes; second period, the formation of pimple, papule, and pustule, lasting from twelve to twenty-four hours; third stage, the extension of the œdema and inflammation, occurring twelve hours after the formation of the pustule; fourth, the stage of gangrene, occurring in from twelve to twenty-four hours later. The disease extended by the poison being carried by the superficial lymphatics only. I am led to this conclusion from the fact that in three of the cases the disease extended from the right side of the pustule, curving upwards over the face; and not until the lines of inflammation or œdema had reached above the line of Wharton's duct did the lips show evidence of disease. Again, the disease in all of the cases was confined to one side of the face, head, neck, and scalp, and did not pass over the median line of the face or the median line of neck posteriorly. The treatment of all of the cases was similar in most respects.

In the second case, Mrs. R., the treatment was free crucial incision of the pustule; injection of pure carbolic acid into the pustule; quinia in large doses, car-

bonate ammonia, tinct. ferri chloridi, and whiskey punch internally; free incision of the lips, and injection of pure carbolic acid, with local application of alcohol to the face.

The third case, Mrs. H., I did not treat.

The fourth case, Mr. P., was under my care from the time the papule was formed; free crucial incision was practiced at once, and pure carbolic acid was injected into the tissues around the pustule; he was put upon quinia, four grains every three hours; tinct. ferri chloridi, thirty drops every three hours, and whiskey punch. As soon as the lips showed indications of the disease free incisions were made, and carbolic acid was injected into them, and also into the angle of the mouth; lead-water and laudanum applied to the face, which appeared to act better than alcohol; used as a poultice, linseed meal, tar, and tinct. iodine; when indications of septic poisoning occurred he was given aqua chlorinata in drachm doses every four hours, which was continued until December 20th. The attacks of pleuro-pneumonia were treated by counter-irritation of the thorax, and quinia, carbonate of ammonia, with the addition of morphine.

The immediate cause of death in the three cases was, I believe, by thrombus of the cerebral veins or sinuses, the intimate connection of the pterygoid plexus with the facial vein, also the connection of the ophthalmic vein with the angular vein, a continuation of the facial, and the vein passing from the internal surface of the nasal cavities up through the foramen cæcum to the longitudinal sinus, the pterygoid veins and ophthalmic veins emptying into the cavernous sinus. Mr. H., Mr. R., and Mrs. H. became rapidly comatose, had stertorous breathing, and complete paralysis before death, all symptoms of compression of the brain. Billroth reports a case of death from malignant pustule, in which the post-mortem examination showed thrombus of the temporal veins, which was traced to the ophthalmic, and through the ophthalmic to the brain. Bartholow gives as the most frequent cause of sudden death in erysipelas of the face and head thrombus of either the longitudinal, cavernous, or lateral sinus.

"In cases of malignant pustules rigor mortis usually sets in early and passes off quickly; the body is often cyanosed; the face may be swollen; petechiæ on chest and abdomen are not uncommon; decomposition usually sets in early. The blood is generally dark, lake, and tarry, and in the heart often uncoagulated; the subcutaneous cellular tissue of the parts affected is hæmorrhagic, and hæmorrhagic patches radiate into the surrounding tissues, which are extensively infiltrated with a semi-gelatinous blood-stained fluid. In the pulmonary and gastro-intestinal form other anatomical characters are observed.

"The most important point in the microscopic anatomy is the presence of the bacillus anthracis in the blood and tissues, either diffused or forming masses in the lymphatics and vessels; the bacillus anthracis, as seen in the blood, consists of a motionless, short, apparently homogeneous rod or filament, rarely less than $\frac{1}{2500}$ of an inch long, either straight, curved, or bent at an acute angle. The usual mode of multiplication in the blood is by transverse fission. The bacillus anthracis requires for its growth the presence of a nitrogenized pabulum and a supply of oxygen; its vitality is destroyed by a temperature of 60° C.; when dry the rods themselves can be preserved but a short time, while the spores retain their vitality for years and are unaffected by ordinary changes of climate or temperature."[1]

The bacillus anthracis is a bacterium, first discovered by Pollender in 1849. All parts of the bodies of animals dying of the disease are actively poisonous, and may convey the disease by direct or mediate contagion; it may arise from eating the flesh, though the poison is said to be destroyed by cooking; contagion may also be conveyed by butter or milk. The bites of flies may also convey the poison. Contagion occurs in those who have to deal with the wool or hair of animals which have died of the disease, such as wool packers and sorters, horse-hair cleaners, farriers, tanners. The poison may enter the system either by local inoculation or by inhalation of the dust containing it. The diffusion of the poison by water and its distribution by means of wool-waste and bone-dust, used as manure, especially deserve notice, as capable of spreading the contagion.

"In the earlier stages diagnosis is very difficult, except in persons who are known to be exposed to contagion. At a later stage the characteristic features of the pustule render the recognition comparatively easy, and microscopical examination of the serum contained in the vesicles shows the presence of the bacillus anthracis. Inoculation experiments on guinea-pigs or mice will, if successful, readily decide it, but no absolute conclusion can be drawn from failure to inoculate.

"The prognosis is extremely unfavorable."

RETAINED PLACENTA.[2]

BY O. W. DOE, M. D.

IN 1861 Mr. Priestley communicated to the Obstetrical Society of London a paper on the Treatment of Cases of Abortion with Retained Placenta, urging manual interference if the placenta be retained longer than six hours, and earlier should hæmorrhage occur to any unusual extent. In this opinion he was seconded by such men as Dr. Tanner, Dr. Hall Davis, Dr. Tyler Smith, and others.

Since that time this question has been very much discussed, and recently as great a diversity of opinion regarding the treatment to be followed has existed in those cases where the placenta and membranes are not expelled with the fœtus as has lately been shown in the New York Academy of Medicine regarding the nature and cause of puerperal fever.

Drs. Mundé and Alloway advise either manual or instrumental removal of the secundines immediately after the expulsion of the fœtus in every case where the cervical canal is sufficiently patulous to permit the introduction of the finger, curette, or placental forceps, while Dr. Sweringen, with others prominent in the Indiana State Medical Society, prefer to leave its expulsion to the forces of nature, excepting in cases where some emergency demands its immediate removal.

Two years ago Dr. Warren, of Portland, read a paper upon this subject, in which he urged immediate removal of the placenta and membranes, as recommended by Dr. Mundé, and produced, in substantiation of this method of treatment, letters from Drs. T. G. Thomas, Lusk, Mary Putnam Jacobi, and others

[1] Greenfield.

[2] Read before the Boston Society for Medical Improvement, April 28, 1884.

equally prominent, who strongly advised this procedure. In the discussion which followed Dr. Gordon expressed himself as decidedly opposed to the advisability of forcible extraction, and reported a case where attempts to remove the placenta failed, and six weeks later it was expelled without any trouble resulting from its retention excepting an occasional slight hæmorrhage.

Dr. Coles, of St. Louis, has recently read a paper before the Obstetrical Society of that city purposely to controvert the views of Drs. Mundé and Alloway, and styles the doctrines inculcated by them as "dangerous in their tendencies" and "too dogmatic and sweeping in character." The tone of the discussion which followed favored a more conservative method of treatment, in so far as instrumental interference was concerned.

The treatment which I follow in my own practice is to attempt its manual, though not forcible, removal at once, as soon as the fœtus is expelled; if unsuccessful to tampon and wait from twenty-four to forty-eight hours. If retention still exists, to etherize and remove it manually, or instrumentally if necessary, as the danger of septicæmia seems to me much greater than that arising from its forcible removal carefully performed, and followed by antiseptic injections.

While this subject is at present so openly disputed by the most prominent members of the profession, I thought it might be interesting to the Society to hear the report of a case which was left entirely to nature, this conservative action arising from an error of judgment rather than from being an intentional act.

Mrs. G., aged twenty-seven, a lady of delicate and rather nervous organization, was last unwell from the 18th to the 22d of September, 1882. The catamenia began at the age of fourteen, and had always been regular. On the second and third Sunday in October she fainted in church, and during the third week of that month first began to suffer from nausea.

Her husband was taken ill on the 15th of January, and she was not only very anxious about him, but overexerted herself in going up and down stairs.

On the 17th the catamenia appeared, as she supposed, but the flow was very slight, hardly sufficient to soil one napkin, and the only pain attending it was an occasional sharp pain above the pubes, producing a sensation as if something in the back passage was pressing against the front. She remained in bed ten days, and was positive that nothing passed away from her during that time. Two days after getting up and going down stairs the flow began again, and continued at intervals for five weeks. At times it was quite profuse, but no clots passed away, and there was no pain, with this exception, that four days after the hæmorrhage commenced she was quite constipated, and took a large hot enema, and when this operated the pain low down in her back was so severe that she asked the nurse to press firmly against it. She was not conscious of anything having passed from the vagina.

I saw her in consultation on the 15th of March. At that time there had been no flowing for a week. She complained of feeling continually as if there was a heavy weight in the pelvis, and said she could not lie on her abdomen, as was her custom when well. This weight she could feel move when turning from one side to the other.

From external examination there was nothing abnormal to be detected in the hypogastric region. On vaginal examination the os was very small, and did not appear as if it had been previously dilated; the cervix was of usual length, and directed more anteriorly than normal; in the posterior cul-de-sac was felt a small body which I took to be a retroverted uterus, very sensitive on pressure, and quite freely movable. As she was very nervous and debilitated from her long confinement to the house, I thought it best to defer any attempt at replacement until her general condition was improved by tonics, and the sensitive congested body of the uterus relieved by hot vaginal douches. She steadily improved under this treatment, and was soon out driving. On June 23d she was taken unwell, as she supposed; the flow continued for a week, though very scanty, being dark and slightly offensive in character. Examination a week later showed the body of the uterus to be very much less sensitive and less easily reached, and though the patient was feeling quite strong, and had come by rail twenty miles to my office, she yet complained of this heavy weight in the pelvis. On the 11th of July she went to Concord, N. H., and there drove about almost daily, and improved greatly. On the 8th of August she was again taken unwell, and returned to Boston during the day. During the afternoon of the 9th she began to suffer from severe paroxysmal attacks of pain in the hypogastric region, which continued until evening, when they became expulsive in character, and at eleven P. M. a placenta was expelled, in size corresponding to at least three and a half months of pregnancy. There was but little hæmorrhage, and her convalescence was rapid and uninterrupted.

In summing up the facts in this case we find that she was last unwell on September 22d. She must have conceived soon after, as she fainted on the 8th of October, and began to suffer from nausea soon after the 15th. Her flow first began on the 17th of January, but she had no pain whatever until the 2d of February, when she had a severe pain in her back, while having a very constipated movement of the bowels. She was not conscious at the time of anything passing from the vagina, and the flow was not materially increased. With this exception she had no pain until August 9, 1883, when the placenta was expelled, being ten months and nine days from her probable conception, and one hundred and eighty-eight days from the date when there was the only possible chance of the fœtus having passed away.

The questionable mistake made, as subsequent results proved, was in not dilating the cervix and exploring the uterus at the time I first saw her in March. As it was then doubtful whether she had really been pregnant, and the uterus being so extremely sensitive, I thought it best to defer operative interference. The possibility of a retained placenta seemed hardly tenable, as we could get no history of a fœtus having been expelled, and we were positive in our convictions that pregnancy did not then exist, it being nearly seven months since the catamenia appeared regularly in September. Evidently at the time the abortion took place the placenta was adherent throughout, otherwise there would have ensued decomposition of the detached portion with possible septic poisoning and a more profuse hæmorrhage, and consequently any operative interference at that time would have been necessarily hazardous.

Dr. Mundé, among other indications which should induce the practitioner to forcibly remove the placenta, mentions hæmorrhage (without qualifying its ex-

tent). The case I have reported, as also that of Dr. Gordon, shows it may not be necessary excepting when when the hæmorrhage is profuse.

The degenerative changes which lessens the placental attachment to the uterus nature was slowly and safely instituting, and consequently even had I been cognizant of the placental retention I should not have considered myself justified, in view of the very sensitive condition of the parts, in dilating the cervix and curetting the uterus at the time I first saw her, as the danger thereby, it seems to me, would have exceeded that which the more conservative method followed subjected her to.

Dr. S. L. Jepson, of Wheeling, Virginia, in the *Journal of Obstetrics* for 1883, reports two cases of retained placenta, one of sixty-six days and the other of one hundred and fifteen days. He remarks that this latter period was the longest he had been able to find recorded. In each of these cases the placenta was removed instrumentally at these times, interference being necessitated by alarming hæmorrhage. In the case of longest retention the placenta was removed by forceps and curette after great difficulty. Eighteen months later she died twenty minutes after being delivered at full term, by turning.

Although there was no autopsy, Dr. Jepson thought it possible that death was caused by a rupture of the uterus due possibly to damage inflicted at the time of the removal of the placenta, as there was sudden collapse, after long continued violent uterine contraction, and immediate recession of the head followed.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

THE MICROCOCCUS OF PNEUMONIA.

Mendelsohn [1] has brought together the principal facts which have gradually accumulated, and which point towards the infectious nature of pneumonia. These show that the disease appears with a certain typical frequency at different seasons of the year, just as intermittent fever, typhoid, or other infectious diseases. This distribution does not correspond with a more frequent occurrence during the colder and less frequent during the warmer seasons; further, some localities are attacked at times with the greatest virulence, while neighboring places having the same climatic conditions are exempt; and finally, hot and cold regions are visited equally. "Catching cold" as an exciting cause can almost always be excluded when the histories of the cases are carefully considered, and is an ætiological factor of the patient's own assumption. The method of onset and close are entirely different from those observed after taking cold. While these last begin gradually, pneumonia sets in suddenly with a severe chill. The termination differs still more markedly. The high fever drops within a few hours to under the normal, and the patient, who has been very sick up to this time, rejoices in a feeling of well being.

The direct proof of this suspicion, aroused by clinical observation, is given by the discovery of the constant presence of a form of micrococcus in the lungs.

Klebs was the first to characterize this as a parasitic affection, and he described as monas pulmonalis a micrococcus which he found in the hepatized lung, carefully freed from bronchial mucus, of a person recently dead. These were often to be seen in great numbers, and often so infrequent that they were only to be distinguished by other granular masses by being arranged in rows. In fresh preparations a quick movement was noticed. The same organisms were also found in the fluid in the ventricles of the brain. This author likewise called attention to the epidemic character of the disease.

Eberth next demonstrated the parasite in a case of pneumonia complicated with meningitis. Small, slightly oval or round bodies were found in the richly cellular and fibrinous exudation of the gray hepatized portions of the lungs, as well as in the purulent and fibrinous layer on the pleural surface. In part these were single balls, but the greater number were united in pairs, and had a gentle movement among themselves. Long chains or columns were never seen.

Koch has published the appearance found in a case of fatal pneumonia, which, however, is not to be regarded perhaps as of a pure type, as it occurred as a sequel to recurrent fever. The distribution of the parasites in this case recalled that of those found in erysipelas. The micrococci were only found in the alveoli adjoining the hepatized portion, and most abundantly in such as were only partially filled with an exudation. As in erysipelas, the living organisms surrounded the centre of disease by only a narrow zone. Similar bacteria were also found in this case in the capillaries of the kidney. They lay in the vessels united together in chains, but clearly showing their oval form.

The clearest description, and the most convincing proof of the connection of these organisms with the disease, has been furnished by C. Friedlander.[2] The cocci are of ellipsoidal forms, their length equals almost a micro-millemetre, their breadth about one third less; they are usually joined together in pairs (diplococci), but often form longer chains. In the fibrinous coagulations in the bronchi they are spread over a considerable surface in a flat layer. They are most abundant in the reddish-gray infiltration, less so in the yellowish-gray and gray hepatization. In one case the lymph channels of the interstitial connective tissue which lay on the boundary of the hepatized territory were filled to such an extent as to cause varicose swelling of the walls. The vessels thus filled could be distinguished by the eye in preparations cleared up by acetic acid, as silver-colored lines.

The method which he has used to show the presence of the parasites is as follows: Small portions of the hepatized lung are hardened in alcohol, and thin section made. These are colored by staining deeply in an aniline water solution of gentian violet. (Gentian violet, one gramme, aniline water (made by simply shaking aniline oil in water and then filtering) fifty grammes.) Afterwards the sections are placed for a short time in a weak watery solution of liq. iodinii comp. Upon placing in oil of cloves the blue color is discharged from the ground substance and nuclei of the tissue, while the micrococci appear in contrast, intensely colored. The author lays great stress upon the presence of a "capsule" as characteristic of this particular parasite. This presents itself as a feebly-colored belt of the same form, and from two to four times as broad as the micrococcus itself, and sharply bounded on

[1] Zeitschrift f. klin. Med., Band xvii., s. 178.

[2] Fortschritte der Medecin, November, 1883.

its outer edge. Diplococci and chains of three or four are inclosed in a common capsule, which then has an elongated form. Different micro-chemical tests warrant the conclusion that this capsule consists of mucin or a closely allied substance. The search for analogous capsules in micro-organisms of other origin has been for the most part negative. On the other hand, similar micrococci with capsules have been found in the pleuritic and pericardial exudation occurring in pneumonia, in the serous infiltrated adhesions, and in the simply œdematous parts of hepatized lungs. These were not found in the blood and other organs, and at times in inflamed lungs, where the process had existed longer than six days. The formation of the capsule appears then to be an attribute of the pneumonia coccus when it has reached the height of its development.

For purposes of cultivation outside of the body a preparation of gelatine, to which an infusion of meat with peptone and salt had been added, furnished the best nutritive material. A minute amount obtained from a fresh lung, inoculated on such a soil with strict precautions, soon developed at ordinary temperature into a little button-like eminence of a dull white color; this penetrated downwards with a sharp point into the gelatine, giving a peculiar "nail-shaped" culture. Microscopic examination showed this to be composed of elliptical micrococci thickly laid together. Capsules were only found surrounding a few of the single cocci. The gelatine did not become fluid with the older growth. The parasites could be made to grow on blood serum and potato, and their infective properties were proved by the inoculation of animals.

A portion of one of the cultures on gelatine was emulsified with water and injected by means of a syringe through the thoracic wall of nine rabbits, thirty-two mice, eleven guinea-pigs, and five dogs. The rabbits were entirely refractory, as were four of the dogs. On the other hand, thirty-one mice died in from eighteen to twenty-eight hours, one mouse in forty hours. At the autopsy in all these cases there was found a typical picture: a dirty red slimy fluid in the pleural cavity, the lungs almost entirely without air, with numerous foci of reddish infiltration. Micrococci were found in the pleuritic fluid, as well as in the blood even while circulating, which presented all the characteristics, especially the capsule formation, of the microbia of pneumonia. In the control experiments made with indifferent fluids injected in the same manner either the mice remained unharmed or died from other accidental causes. Six of the eleven guinea-pigs died, three in from twenty-four to forty-eight hours, three after a somewhat longer interval. In these there was found a double purulent pleurisy reddening and œdema of the lungs (three times red, reddish-gray, or gray infiltration).

In the lungs, and the foci of infiltration in them, at times only very few or no micrococci were to be met with. On the other hand, these were very numerous in the fluid from the pleural cavity, and could easily be cultivated. The micrococci with capsules were found very sparingly in the blood of two guinea-pigs. The five animals that remained unharmed showed themselves as entirely free from the micro-organism.

Experimentation by means of inhalation was made upon mice, and of these some were attacked by a typical pneumonia or pleurisy. In regard to the identity of the pneumonia coccus in the different kinds of animals, the size of many of the parasites in the mice greatly exceeded that from man. The cocci of the guinea-pig are smaller, but marked by an exceedingly broad capsule. In the dog they are hardly larger than in man, the capsule being but little broader than the organism itself.

Emmerich [1] has traced the cause of an epidemic of pneumonia which occurred in the prison for males at Amberg to a local infection of the dormitories. He was led to suspect that the refuse building material used to fill between the floors might harbor the parasite. He accordingly sowed minute fragments of this on gelatinized beef extract with peptone, after the method of Koch and Loeffler, spread upon glass slides.

After three or four days different kinds of fungi could be distinguished springing up. The gelatine was then rendered fluid by melting, and small quantities (one fourth to two cubic centimetres) were injected through the thoracic walls into various animals (rabbits, guinea-pigs, and mice), also into the blood of the first named. The animals died in from twelve to thirty hours. In the guinea-pigs the lungs were dark red; in the rabbits clear red; the spleen much enlarged. On the gelatine cultures as well as in the blood and organs of the animals there were found, besides various septic bacteria (especially the bacillus of malignant œdema), the peculiar encapsulated micrococci of pneumonia.

The cultivation on sterilized slices of potato seemed to this author to give a most characteristic growth. On this they developed in a yellow, slimy layer several millimetres thick, which had the peculiar property of always remaining moist. The capsules were found upon the cocci grown upon gelatine, while they were wanting where blood serum was used.

The anatomical appearances of the infected animals were characteristic.

All the mice and one half the number of guinea-pigs (in all about fifteen and twenty-five respectively) died in from twelve to thirty hours after the injection. Within two hours the breathing became deeper, and dyspnœa set in, which increased with the weakness until death.

Control experiments were made by using other pathogenic fungi in the same way. Circumscribed infiltrations of the lung were observed, but never well marked lobar pneumonia.

These experiments show the identity of the micrococcus of pneumonia and that found in the filling between the floors, where they must have existed in great numbers. The cracks between the boards gave exit to them, and thus they were widely distributed about the room.

In ordinary soil a similar coccus is found, but which grows differently on the prepared gelatine. In the space between the floors of houses where there had never been an epidemic of pneumonia the parasites could not be detected.

Should future investigations confirm these facts they will go far towards clearing up the ætiology of this disease in one of its essential points, namely, its occurrence as a house epidemic.

THE IDENTITY OF THE MICROCOCCI OF THE PNEUMONIA OF MAN AND OF THE CONTAGIOUS PLEURO-PNEUMONIA OF CATTLE.

Poels and Nolen [2] have examined the lungs of animals who have died from the above disease, and found numerous micrococci with the characteristic capsules.

[1] Allgemein. med. Central. Zeit., 1884.
[2] Centralblatt f. d. med. Wissensch., 1884, No. 9.

These presented themselves as mono- or diplococci, or as longer chains composed of several individuals.

Culture experiments were started at the same time on blood serum, material from human lungs and from animals being sowed. The result showed that the micrococci which came from these two sources developed into the characteristic "nail-shaped" growth when kept at the same temperature. Further inoculations were made from these pure cultures. Here, also, the results were identical. From these facts the authors believe in the identity of the organism which causes the disease.

THE ÆTIOLOGY OF ASIATIC CHOLERA.

During the past year a commission has been appointed by the German government to investigate the causation of cholera, and the results are embodied in letters written by Dr. R. Koch,[1] the head of the Commission. The first investigations were made in Egypt, but as the epidemic had almost subsided there the scene of their labors was shortly afterwards transferred to India, where the pest still raged.

On account of the great number of bacteria normally present in the intestine, it was very difficult at first to determine whether there was only one which was to be considered as associated exclusively with cholera. In the majority of cases death does not occur at the height of the process, but in the stage of reaction. At this time such marked changes appear in the condition of the intestine and its contents that it is impossible to obtain a clear idea of the lesions of the disease. It was not until a series of uncomplicated cases had been studied at autopsies that the real pathological relations could be determined, and then the greatest care had to be exercised in regard to the causal connections.

As the result of such examinations there has been found in the walls of the intestine of cholera patients a bacillus which can certainly be differentiated from all others by the following characteristics: The rods are never entirely straight, but curved a little like a comma, and can even assume a half-circular form. In the pure culture these curved rods often combined into S-shaped figures, and more or less slightly wavy lines. They possessed independent motion, which was very lively, and could be best seen in a drop of salt solution suspended from a cover glass. In a preparation of this sort the bacteria are to be seen swimming in all directions in the field of the microscope.

Their relation to nutritive gelatine is also very remarkable. At first they form colorless, transparent colonies, resembling small bits of broken glass. Gradually these liquefy the gelatine, and then spread out to a moderate degree. In this way they can be readily distinguished and isolated from the other bacterian growths. They can also be cultivated in hollowed object glasses, and accumulate on the edge of the drop of nutritive fluid, where they are clearly marked by their comma-like shape and rapid movements.

Up to the present time opportunity has been afforded for the examination of twenty-two bodies and seventeen cholera patients. In all of these the peculiar-shaped bacilli could be found both in the microscopic preparations from the subject and from the gelatine cultures.

This result, taken in connection with that obtained in Egypt, justifies the conclusion that these bacilli regularly occur in the cholera intestine.

[1] Allgemein. med. Central. Zeit., March 15, 1884.

In order to control this, twenty-eight other bodies were examined, eleven of which were of patients who had died from dysentery, the discharges from simple diarrhœa as well as from a person who had recovered from cholera, also the intestines of healthy and diseased animals, and finally water rendered foul by putrid masses, stagnant water from swamps, and scum from the surface. In not a single instance could the bacillus of cholera be found.

Since poisoning with arsenic gives rise to analogous symptoms a series of experiments on animals were instituted, but with negative results as far as finding the comma-shaped parasite.

The question then arises, In what relation do these peculiar organisms stand to the disease? Either these specific bacteria are favored by the cholera process, and are associated in such a remarkable way with its progress, or they are the cause, and the malady can only arise when these specific bacilli have found their way into the human intestine. The following grounds render the first supposition improbable: It must first be premised that a man who is ill with cholera must already have this particular form of parasite. But the bacilli are wanting even in intestinal affections like dysentery and diarrhœa, to which cholera is so often added. And it is hardly possible if they are normally present in every body, as the fact of their being found both in Egypt and India would tend to show, that they could have escaped observation up to the present time. Since, then, the growth of these bacteria cannot be produced by cholera, the second hypothesis alone remains, namely, that they are its cause. A number of other facts speak also for this assumption in a way not to be denied. Above all the relation during the progress of the disease. Their occurrence is entirely restricted to the organ which is the seat of the affection, namely, the intestine. In the vomitus they were but twice found, and then this had an alkaline reaction, showing that the intestinal contents, and with this the bacteria, had found their way into the stomach. In the intestine itself they deport themselves in the following manner: —

As long as the stools remain fæcal in the early stage of the disease only a few bacilli are to be found. On the other hand, the succeeding watery, odorless evacuations contain the specific bacteria in large numbers, while all the others have entirely disappeared, so that it almost amounts to a pure culture. As soon as the attack decreases and the stools again become fæcal the comma-shaped bacilli disappear gradually, and are not to be found after the restoration to health. The appearances after death correspond entirely with this. In the stomach nothing is found. The condition differs in the intestine, according as the patient has died during the proper attack or after it has ended. In the recent cases, in which the intestine is of a light red color, the mucosa free from extravasations, and the canals contain a whitish, odorless fluid, the parasites are found in enormous masses and entirely pure. Their distribution corresponds with the seat of inflammation, being most abundant at the lowest part of the small intestine. When death has taken place at a later period of the disease signs of marked reaction are manifest. The mucosa of the lower part of the gut is marked by dark-red extravasations, and often with a slight necrosis of the superficial portions. The contents are more or less colored with blood, and putrid and offensive from the reappearance of the bacteria

of decomposition. The specific bacilli are quite abundant in the tubular glands and the surrounding tissue, but not in the free contents. They are only entirely wanting in cases which have died from other diseases after the attack had passed off.

The cholera bacillus deports itself in the same manner as any other pathogenic bacterium. They occur exclusively in the disease to which they belong; their first appearance coincides with the beginning; they increase in number with the progress, and decrease with its decline. Their seat corresponds with the extent of the lesions, and their numbers become so great that the deleterious working on the mucous membrane can be explained by them.

It was greatly to be wished that an analogous disease could be artificially produced in animals. This has, however, not succeeded as yet, and to all appearances it is doubtful if it ever does. Yet the proof of the above-mentioned facts is not weakened by the failure of the experiments upon animals. In two other diseases, namely, typhoid fever and leprosy, specific bacteria occur which it is impossible to inoculate upon animals.

Moreover, the further study of the bacilli has brought out other characteristics which are of importance in this regard. One of the most remarkable is the repeated observation that the cholera bacilli increase in a remarkable manner upon the linen which has been soiled by the dejections of the patients and kept in a moist place for twenty-four hours. And in close connection with this is the clinical fact that persons who have to handle this soiled linen are especially subject to infection. Experiments were instituted by spreading some of the cholera dejections upon damp linen, filter paper, and earth. After twenty-four hours the slimy layer had regularly increased to a thick mass of characteristic bacilli.

This organism dies much more quickly upon drying than any other bacteria, three hours being sufficient to deprive it of all vitality. Further, the presence of an alkali is always necessary for their growth. Even a little free acid which did not markedly hinder other bacteria kept these back in their development. In a stomach which acts normally they are killed, and this is further borne out by the fact that neither in the stomach nor intestinal tract of animals which had been fed on cholera dejections could these organisms ever be detected. This last peculiarity, together with the readiness with which they are killed upon drying, gives a clew to the fact that infection so seldom occurs from immediate contact with cholera patients. Especial circumstances must be brought up to enable the parasite to pass the stomach and set up the cholera process in the intestine. Perhaps it could do so if the digestion was disturbed. And it is a well-known fact that men who have digestive disturbances are the most apt to sicken during an epidemic. Perhaps, also, there is a condition of the bacillus analogous to that of the reproductive spores of anthrax, but which up to the present time has not been discovered.

Still further proof of the rôle which the specific bacillus plays has been presented by Koch[1] in an account of a local epidemic of the disease which occurred near Calcutta, and which could be directly associated with the presence of the parasite in a contaminated tank.

It is the custom of the country for a number of families to use a common tank (which is merely a little pond or swamp-hole) for all the domestic purposes of washing and drinking water. The edges of the tank are often lined by privies, the contents of which are not prevented from contaminating the basin.

A local epidemic was reported to the Commission as having broken out in the neighborhood of one of these places. Samples of the water were immediately collected and sown upon nutritive gelatine; a development of bacilli corresponding in character with the specific organisms was developed, but with the decline of the epidemic such cultures were not to be obtained. Investigation showed that the tank had been used for washing the linen of a cholera patient, and the water had been contaminated in this way. Koch regards this in the light of an accidental experiment upon man, which is to be considered of the greatest value, especially since other animals have been found refractory to the disease.

[1] Allgemein. med. Central. Zeit., April 5, 1884.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

April 28, 1884. The President, Dr. Charles D. Homans, in the chair.

PSEUDO-MEMBRANOUS ENTERITIS.

Dr. O. W. Doe showed a specimen of membrane which was passed by a patient suffering from pseudo-membranous enteritis, one portion being twenty-seven inches in length. This case, which is still under treatment, will be reported at a subsequent meeting of the Society. It appears similar to those reported here by Dr. Goss three years ago.

REMOVAL OF FŒTAL BONES BY RECTUM.

Dr. Doe also showed a collection of cranial bones of a fœtus at about the seventh month, which he had removed through the rectum three days before. The patient was last pregnant ten years ago, and had supposed that she miscarried at that time. The case will be reported in full later.

Dr. J. P. Reynolds inquired if the anus was lacerated in removing these bones.

Dr. Doe said that it was not. On the contrary it was very dilatable, and, being stretched by the fingers, the bones were worked from side to side with the forceps.

Dr. S. G. Webber read a paper on

MULTIPLE NEURITIS,

showing microscopic sections. The report of the debate is delayed by request of Dr. Webber.

Dr. O. W. Doe read a paper[2] on

RETAINED PLACENTA.

Dr. C. Ellery Stedman said that the treatment of retained placenta after abortion had to be left to each physician's judgment. His own experience left him in no doubt that as the placenta had to come away with more or less hæmorrhage, sooner or later, the proper plan was to avoid danger by removing it from the uterus as early as possible. The risks were from septicæmia and bleeding. He had seen two deaths after abortion from the former cause, though he did not recollect any fatal cases from loss of blood, yet

[2] Vide page 436 of this number of the Journal.

patients were often much reduced, and long in convalescing. Books tell us the finger is the best instrument for removal of the placenta, but do not instruct that for this purpose the hand has generally to be introduced into the vagina, which often necessitates ether. Sometimes a stiff wire doubled into a blunt hook was a help. The use of tents after abortion was to be avoided if possible, as it is fraught with danger, and, if for this reason only, he liked to empty the uterus as early as it could be done.

Dr. Francis Minot thought the proper treatment of retained placenta after abortion would vary according to circumstances. In recent cases it was sometimes difficult to determine whether the placenta or portions of the ovum were really retained or not because the clots were not preserved for inspection. In case of doubt it is best to wait for a day or two before exploring the interior of the uterus. But in case of continuous hæmorrhage, and especially in that occurring at intervals for weeks or months, no time should be lost in emptying the womb. He had rarely had any difficulty in doing this with the finger if the woman be etherized and placed on her left side, close to the edge of the bed, with the knees drawn upwards. Then the physician, pressing the fundus downward with the left hand over the pubes, and introducing the right hand into the vagina, can make the forefinger or the middle finger of the same hand meet the fingers of the left with only the uterine and abdominal walls between. In very fat women we sometimes fail to reach the fundus, and then the only resource is to fish for the placenta with long forceps, a tedious and difficult operation.

ETHERIZATION BY THE RECTUM.

Dr. Abner Post reported three cases at the Boston City Hospital. The *Boston Medical and Surgical Journal* of April 17th had a short account of etherization by the rectum as done at Lyons. Its administration in that manner has been tried at the City Hospital since that publication.

The ether has been given from a small bottle with a perforated cork, to which is attached a rubber tube, to the other end of which is fastened a catheter. The bottle of ether is placed in a vessel of warm water, and the catheter passed into the rectum. The ether is seen to boil in the bottle, and its vapor is conveyed through the tube into the bowel. The hot water used was drawn from the hot-water pipes, and was so hot as to be uncomfortable to the hands.

The first case was a patient of Dr. Homans, a man with cellulitis of the arm, who had been vomiting before etherization. After the tube was introduced he first complained of the taste of ether in the mouth. It was then noticeable to the by-standers in his breath. His pulse grew rapid, the pupils dilated, he partially stiffened out, put his hand to his mouth, vomited, and anæsthesia was complete at the end of thirteen and a half minutes. The ether was discontinued almost as soon as he was insensible, but the anæsthesia continued for nearly thirty minutes, probably not so complete as to allow surgical interference without shrinking during all that time, but so complete that he lay without motion. During the afternoon he had two or three loose discharges, mostly gas, for which he received a starch and opium enema, and which soon ceased.

The second case was a woman of large size, who had eaten a hearty breakfast before coming to the hospital. She took an ounce and three quarters of ether, and was insensible for thirty-four minutes. During the etherization the ether was administered evidently faster than absorption took place, as her abdomen became sufficiently distended to embarrass respiration; but a little pressure on the abdominal walls caused the gas to issue from both ends of the abdominal tube, and all difficulty ceased.

On recovering this woman vomited perhaps an ounce of thin, yellowish fluid. Within an hour had a natural movement of the bowels, and afterwards two slight loose operations, one of which was tinged with blood.

The third case was in every way a most favorable one except in length of time required to produce insensibility. The ether was given more slowly to avoid the distention of the bowels that had occurred in the previous case. A little less than two ounces was given, and etherization was complete in fifteen minutes. The stage of excitement was marked by a laugh and a comical remark or two, but no struggle. Insensibility continued nearly thirty minutes, and no unpleasant symptoms occurred during recovery. This patient was operated on for piles, and her rectum was packed with sponges to provide against hæmorrhage. Slight meteorism occurred, but no more than might well follow the closure of the anus. The sponges were removed after a few hours, but no diarrhœa showed itself.

So far as it is possible to draw conclusions from present experience, etherization by the rectum differs from inhalation principally by the absence, or rather the diminution, of the stage of excitement.

If vomiting occurs during the etherization it does not interrupt the administration of the anæsthetic.

The unpleasant after effects seem less marked. Vomiting, if it occurs at all, is slight.

The secretion of mucus, which so frequently fills the mouth and air passages, has not occurred so far. The spasm of the glottis which sometimes occurs at the commencement of inhalation, and which is the result apparently of the local effects of ether vapor, is not to be expected by this method.

The feeling of suffocation which is so common when ether is given by inhalation, and which is the cause of most or at least a large number of the struggles which patients sometimes indulge in, is wanting.

Of course the constitutional effects of ether, however given, are the same. The use of a much smaller quantity is sufficient to induce anæsthesia when given by the rectum, where all is absorbed, than when given by inhalation; at the same time the effect is slower in most cases. After complete anæsthesia is reached it is apt to grow more profound after the supply of ether has been removed — so that its administration should cease when once the patient is asleep.

The effect of ether upon different individuals varies very widely. It cannot be supposed that no patient will ever struggle if etherized by the rectum. Of course the man who makes a row whenever he is drunk will probably show his ugly disposition when ether is the cause of his excitement, but so far the excitement shown has been very small. The disagreeable effects seem to consist in the possibility of blowing up the rectum. Evidently the power of absorption differs in different individuals; probably the rate at which the vapor is poured into the rectum differs, as it ought to do, where the heat applied is indefinite and variable. It is necessary to watch the abdomen somewhat to see that it does not become ballooned.

An irritation of the rectum is set up in some cases which, perhaps, corresponds to occasional effects on the air passages when the ether is inhaled, but nothing so far has transpired to cause alarm or anything more than a temporary inconvenience.[1]

DR. WEBBER quoted the account of rectal etherization at Lyons, given in the *New York Medical Journal*, as stating that the process was finished by the mouth in some of the cases. He asked the experience of Dr. Post.

DR. POST thought the French surgeon must have been impatient. Etherization was profound.

DR. CHARLES D. HOMANS said that etherization was slower than in the common way. There was also much less ether used.

DR. POST said that there was less excitement as well.

DR. H. K. SABINE inquired if this method was used for the first time at Lyons, or had the Swedish surgeon who proposed it there seen it elsewhere.

DR. POST said that it was to be inferred from the published account that it had been done at Copenhagen.

NEW YORK ACADEMY OF MEDICINE.

THE TREATMENT OF MEMBRANOUS CROUP.

AT a meeting of the Obstetric Section of the Academy held Thursday evening, April 24th, DR. A. JACOBI read a paper on the medicinal treatment of membranous croup. Having repeated his assertion, made in 1868, that there ought to be no contra-indication to the performance of tracheotomy whenever, no matter how young the child or what complication might be present, there was danger of death from suffocation, and having stated that he had himself now performed it more than four hundred times, he said that he could hardly be accused of underrating the value of that operation (which had, indeed, already been discussed at a previous meeting) if he confined himself on this occasion entirely to the medical side of the treatment of croup.

He spoke first of the use of pilocarpine, and said that he had not modified the opinion which he had expressed in regard to it at the meeting of the American Medical Association in 1881, when he stated that in severe cases of septic pharyngeal and laryngeal disease he had found that this remedy actually hastened the fatal termination by inducing cardiac failure. He then mentioned two cases which had been under his care at the Mount Sinai Hospital, in which one of the children was a little over, and the other a little under, two years of age. Neither case was very severe, and the treatment consisted of the inhalation of steam with the vapor of turpentine, under a tent, and the use of pilocarpine muriate in one-thirtieth-grain doses after the manner of Guttmann. Under this treatment one of the cases got well, but in the other the pilocarpine had to be withdrawn after two days on account of its depressing effect, notwithstanding the fact that alcohol was freely used to counteract this. The final recovery in this instance was attributed, first, to the macerating effect of the pilocarpine on the mucous membrane, and, secondly, to the timely discontinuance of the drug. Dr. Jacobi also mentioned another case, three years ago, which recovered with a fair amount of strength after taking it for four days, and said that his final opinion in regard to it was that it was a powerful remedy, which was of considerable service in certain cases, but which, on account of its debilitating effect, had to be watched with great care, while at the same time its depressing influence was counteracted as far as possible.

In regard to the use of steam inhalations, his views, as expressed in his treatise on diphtheria published in 1880 (page 168), had not changed. In employing them it was not to be forgotten that by this agency the underlying tissues were also softened, and that the poison was thus sometimes enabled to penetrate more deeply. The results were not always satisfactory, and he had seen cases which became distinctly less cyanotic on being taken out of an atmosphere filled with steam. At the same time in many instances the steam was of great service, the benefit depending to a large extent on the special locality affected. Thus wherever there was pavement epithelium beneath the membranes it could not be employed successfully. He therefore again insisted that steam will improve; steam will impair. It was a matter of vital importance where steam inhalations were resorted to that the patient should also have plenty of fresh air.

He also repeated his conviction of the utility of the inhalation of turpentine, which he had first employed many years ago in cases of pneumonia where resolution and expectoration had not commenced. He recommended that about a tablespoonful of the rectified spirits or oil should be poured into water that was being heated over an alcohol lamp or stove or the gas every hour or oftener, and mentioned one case at the Mount Sinai Hospital in which a child two years old was kept, with its nurse, under a tent filled with steam charged with turpentine for four successive days and nights. No other treatment was used except the internal administration of chlorate of potassium and tincture of chloride of iron, and he believed that by this means the case was kept from being a severe one.

Dr. Jacobi then said he would select one topic for discussion in this connection which was not a new one, but which, in the light of recent developments, had excited renewed interest, and that was the treatment of croup by mercurials. In order that the subject might be discussed intelligently he first gave a very careful and complete review of the opinions of various authorities in regard to it from the time that Dr. Samuel Bard wrote, in 1771, down to the present. In regard to his own opinion concerning the use of mercury, in the treatise on diphtheria before referred to he had expressed himself as more favorably disposed towards it at that time (1880) than he had been in former years, and since then he had still further modified his views in the same direction. At the meeting of the American Medical Association in 1881 he had been particularly impressed by the remarks of Dr. William Pepper, of Philadelphia, in favor of the bichloride of mercury treatment. The latter, in the course of his address in medicine, said that his attention had been called to the matter by a paper read by Dr. G. A. Linn before the Pennsylvania State Medical Society, in which he reported a number of cases of pharyngeal and laryngeal diphtheria treated with eminent success with the bichloride, and that he had first used it himself in a case of diphtheritic croup which he saw in consultation with Dr. Yarrow, of Philadelphia.

[1] Further experience leads me to modify somewhat the favorable opinion here expressed. Certain feeble individuals have taken an unusually long time to recover, insensibility has been occasionally so profound as to cause anxiety, and bloody discharges have been more frequent than is desirable. A. P.

The child, at the time the remedy was commenced, seemed actually at the point of death, and the recovery appeared to him nothing less than miraculous. Dr. Jacobi then went on to say that although he did not claim to be one of those "who never lost a case," he had found the treatment by bichloride of mercury very satisfactory as a rule. He recommended that it should be given very largely diluted (about one grain to the quart of water) in order that gastric and intestinal disturbances might be avoided. Having mentioned the great superiority as an antiseptic of this agent to all others that had yet been discovered, he referred to a paper published by Dr. William Thallon, of Brooklyn, in the *New York Medical Journal* for April 12 and 19, 1884, in which he reported ten cases successfully treated with the bichloride.

The last part of the paper was devoted to the treatment of the patient after tracheotomy had been performed, after which he summed up his conclusions as follows: —

(1.) The mercurial treatment of membranous croup is promising of good results.

(2.) Corrosive sublimate is, as a rule, the best of the preparations of mercury for this purpose.

(3.) It should be given early, and the dose frequently repeated.

(4.) It should always be given largely diluted (about one to three thousand).

(5.) To infants half a grain should be given in the twenty-four hours, and this quantity may, as a rule, be kept up for a considerable number of days without any evil results.

(6.) Salivation and stomatitis are very rarely observed, and gastro-intestinal disturbances are not frequent from its use.

(7.) If any such disturbances should result mercurial inunction, preferably by the oleate of mercury, may be instituted for the bichloride.

(8.) If the case is taken in time the treatment for croup itself may frequently be prevented by the use of the bichloride when the croup is the result of descending pharyngeal diphtheria.

After the conclusion of the paper he referred to the details of three cases successfully treated with bichloride of mercury, which he said he had selected as samples out of a large number of others. The first was one which he saw in consultation with Dr. E. J. Hogan, in which the child was apparently dying from increasing obstruction after tracheotomy had been performed. The second, which was seen in consultation with Dr. Hanks, was a case of croup resulting from pharyngeal diphtheria, and the third, a desperate case of fibrous tracheo-bronchitis in an infant of five months, was seen with Dr. T. Herring Burchard, who read a minute history of it. In a few supplementary remarks Dr. Jacobi then said that within the last fourteen years he had never met with so many successful results in croup, either before or after the performance of tracheotomy, as during the past year, when he had largely depended on the bichloride of mercury.

DR. FOREST stated that two years ago he had a case of croup which grew worse steadily for four days, and was suffering from complete aphonia, when Dr. Jacobi, who had been called in consultation, recommended the use of one twentieth of a grain of bichloride of mercury every hour. Three doses of the drug, however, produced such marked tenesmus that the dose was reduced to one fiftieth of a grain, but the latter quantity was well borne, and the case resulted successfully. Since then he had tried the bichloride extensively, and, as a rule, had found that it acted surprisingly well. When he used steam inhalations he always employed Codman and Shurtleff's atomizer, which he thought was decidedly preferable to filling the whole room (the air of which should be kept fresh and at a temperature of about 70° F.) with steam, and he was in the habit of ordering a teaspoonful of listerine to be put in the water of the atomizer every half hour. Whether the antiseptic had any special effect or not on the disease he was unable to say.

After some remarks by Dr. JOHN C. PETERS, who stated that he was a strict localist (believing that in diphtheria the systemic infection originated by absorption from the diseased throat), and principally advocated the topical use of astringents and chlorate of potassium, DR. J. LEWIS SMITH spoke at considerable length on the mercurial treatment of croup. The seniors present, he said, would recall that a number of years ago calomel was in common use in this disease, and some of them would, perhaps, remember quite a noted case that occurred at the Astor House before 1858, when diphtheria was first recognized in New York. A child staying at that house was so seriously ill with membranous croup that several eminent physicians of the city said that it was impossible for it to live, when a practitioner from Albany, where the family resided, as a last resort, gave it twenty grains of calomel dry upon the tongue, after which, to the surprise of everybody, the case began to recover. A prominent medical man in New York at the present day believed that if a large dose of calomel were given at the onset of the attack it would favorably modify the course of the disease; but when diphtheria made its appearance in 1858 the profession were certainly disappointed in the effect of calomel, both in large and small doses, and it was found to produce so much prostration that the mercurial treatment was soon altogether abandoned here, except by a very few physicians. Now, however, there had commenced a revival of the use of mercury. As to the views expressed by Dr. Walton in the paper referred to, he must say that he failed to be convinced of their force. The cases that he reported had been cured by the supposed germicide effect of the bichloride of mercury, which was recognized to be the most powerful agent of this class known to science; but he doubted very much whether it was entirely safe to give corrosive sublimate in sufficient quantities to have a germicide effect upon diphtheritic poison in the system. It was believed that these antiseptic agents acted by being taken into the blood and destroying the disease germs which had found a lodgment there; but he could not but think that if this were the case they would have a destructive effect upon the economy itself, since these minute organisms were as tenacious of life as the corpuscles of the blood, and hence the latter would be destroyed at the same time.

Wherever the pseudo-membranes of croup were formed there was first the exudation from the blood (the fibrine), and, in addition, a collection of altered epithelial cells, as held by Rindfleisch and other authorities. Now as to the fibrine, it was acknowledged by all that it could be dissolved by alkalies, and in a series of experiments in which he had participated together with several other physicians connected with the New York Foundling Asylum it had been demonstrated that a two per cent. solution of liquor potassæ

was sufficiently strong for this purpose. With regard to the solubility of the epithelial cells entering into the composition of the pseudo-membranes by alkalies there was at present considerable difference of opinion, but this epithelial element was supposed to be analogous to *mucine*, and the latter was undoubtedly soluble in a weak alkaline liquid. He felt constrained, therefore, to adhere to his confidence in inhalations of medicated steam as a principal factor in the treatment of membranous croup, and the alkaline formula which he had found of the greatest service was a two per cent. solution of liquor potassæ in lime water to which a sufficient additional quantity of lime had been added to render it somewhat turbid. When in any case he found huskiness coming on he felt it his duty to resort at once to such inhalations, and if there was but a slight deposit of pseudo-membrane he believed it would be promptly dissolved by them. Another important advantage which he thought they possessed was that when there was an accumulation of muco-pus in the respiratory tract below the level of the membranes (which was a frequent additional cause of dyspnœa in croup), the mucus was dissolved by the alkaline vapor, and consequently the pus became thinner and more easily expectorated.

At one of the recent discussions on croup in the Section he had expressed the opinion that nothing of an irritant nature should be used by inhalation or in any other topical way. Since then he had noticed that a writer in one of the journals had advised the employment of such a caustic as nitrate of silver, and he thought it was the duty of the Academy of Medicine to protest strenuously against any procedure of this kind. This was the objection which he had to the bromine treatment which had been so highly lauded in diphtheria by one authority in this city, — it was too irritating. He had been more and more impressed all the time with the great importance of alcohol in the treatment, and said it was surprising to find what large quantities of it were often tolerated. Thus, it was not uncommon to see a child one year old taking with advantage as much as a teaspoonful of brandy or whiskey every hour. He stated, in conclusion, that he should be glad to make trial of Dr. Pepper's treatment with the bichloride of mercury, as indorsed here on this occasion; but so far as its advantages were shown in the cases reported by Dr. Thallon he did not feel altogether convinced of its efficacy. This was on account of the character of some of the cases, which the writer designated as croup when there was simple huskiness, without dyspnœa, present. If he (Dr. Smith) were to classify his own cases in the same way he would be able to report that fully one half of his cases of croup recovered under the use of alkaline steam inhalations. Again, in one of Dr. Thallon's cases inhalations of chloride of ammonium were resorted to, and he thought that possibly some of the good effects noted might have been due to this remedy, which was an alkali.

Dr. Jacobi said, in reply, that he thought it was not fair to confuse the calomel treatment with that by bichloride of mercury. The latter produced salivation less frequently than any other preparation of mercury. As to the destruction of the blood-cells, in addition to the bacteria in the blood, this was doubtless true of most antiseptic agents, if used in sufficient concentration to be efficient as germicides; but it had been demonstrated conclusively that it was not true in regard to bichloride of mercury. It had such an extraordinary antiseptic effect that a single grain of it was sufficient to destroy all disease-germs in the blood of a child of five years, which weighed about two and a half pounds. The poison could thus be completely eliminated without affecting the blood itself, since it had no injurious effects upon the corpuscles; and it was furthermore believed to be the only germicide which could get into the blood in an unchanged condition. It was at present undecided whether diphtheria depended on a micrococcus or not, but he would not discuss that question now. He looked on the bichloride simply as an antifermentative, and he had seen it produce some remarkable practical results. That was sufficient to encourage him to go on with its use, and he was content to wait for a theoretical explanation of its *modus operandi* that could be found correct.

In closing, he said he wished to lay stress again on the fact that when the bichloride was employed it should be given as early as possible and in frequently repeated doses. There were, as a rule, no bad results from it whatever, and in one or two cases he had given as much as a grain in the twenty-four hours. A child of five months should have at least half a grain in that time. Since he had heard of the tenesmus produced by it in the case which he saw with Dr. Forest, however, he had been careful not to have the dose too large, and he was always particular about having it very freely diluted.

NEW YORK COUNTY MEDICAL ASSOCIATION.

SCARLET FEVER IN THE FŒTUS IN UTERO AND IN THE MOTHER AT THE NINTH MONTH OF PREGNANCY.

This was the title of a paper read by Dr. Charles A. Leah at a stated meeting of the Society held April 21st. Scarlatina was so seldom met with in the fœtus in utero, he said, that several authorities of experience have denied that the disease occurred under such circumstances. Thus, J. Lewis Smith, in his work on diseases of children, stated that, while cases had been reported of scarlet fever occurring in the fœtus, and manifesting itself by the usual signs at birth, a clear diagnosis in such instances was necessarily difficult on account of the character of the scarlatinous eruption on the one hand and the nature of the cutaneous circulation in the newly-born on the other. In his opinion, therefore, in the cases alluded to there was probably an error of diagnosis. Prof. Theophilus Parvin, at a meeting of the Obstetrical Society of Philadelphia, held April 3, 1884, after giving an account of an outbreak of measles and scarlet fever in the obstetric wards of the Philadelphia Hospital, stated that while children had been born with measles, he did not know of such an experience with scarlet fever.

It had been his sad experience, however, to see an undoubted case of it in a child at birth during the time of an invasion by the disease of a young family, every member of which, with one exception, was attacked, and in which the wife and mother quickly succumbed before the violence of the onset in her case. The family consisted of the father, twenty-five years old, the mother, twenty-four years old, a son, four years old, and the monthly nurse, sixty years old, and the infection was introduced by a relative who came directly from a household where scarlet fever was raging,

and who, although she did not have the disease herself, was at the time suffering from the form of pharyngitis so often met with during the prevalence of scarlatina among those not attacked. At the time of her arrival also the little boy was affected with the ordinary tonsillitis of childhood. The father, who was the only one of the family known to have had scarlatina before, escaped; but all the others, including the aged monthly nurse, took the disease. The family until a short time previously had lived in the country, and, without exception, had always been remarkably healthy, living in a salubrious neighborhood, and being surrounded by the best sanitary conditions. When they came to New York, however, they occupied a dark and badly-ventilated French flat.

The mother, who was now at the end of the ninth month of utero-gestation, when seized with the scarlatina at once became alarmingly ill. In a few hours the eruption extended over her entire body, and at the same time she felt the most violent motions on the part of the fœtus, so that it seemed probable that it was in convulsions. The mother soon became delirious, and the whole situation appeared so critical that Dr. Leah decided to bring on active labor at once. The cervix readily yielded to digital dilatation, and in four hours he delivered with the forceps a male child weighing nine and one half pounds. He was gratified to find that the hæmorrhage incident to parturition was sufficient to relieve the existing cerebral congestion, so that the mother returned to consciousness, while the febrile and other symptoms were less urgent than before the birth of the child. The improvement continued for twenty-four hours, when the temperature began to increase again, and the skin assumed a dark purple hue. She then continued to grow steadily worse, and died fifty-six hours after labor. After death the body quickly underwent such changes as to render it unrecognizable.

The child, which was well-developed, was found to be unquestionably in the midst of the eruptive stage of scarlet fever. It made no effort at respiration, and rubbing it along the spine, placing it upon the side, and making alternate applications of hot and cold water to its body, had no effect in establishing this function until after the cerebral and hepatic stasis from which the infant was suffering was relieved by allowing about an ounce of blood to escape from the umbilical cord. In addition, the thickened mucus, which was clogging up the air passages and interfering with respiration, was removed by the finger and by suction; pressure was made intermittingly upon the abdomen, and flagellation of the nates was practiced. Notwithstanding all these efforts, however, it was fully fifteen minutes before the child breathed regularly, and it was so excessively weak it was wrapped in warm flannels for a considerable time before any attempt was made to wash it. For some days the whole surface of the body was covered with the eruption, the color of which was often very dark, and it then began to fade. At the same time the throat symptoms, which had been well marked (the mucous membrane of the mouth and fauces presenting the typical appearance, with the characteristic raspberry tongue, of scarlet fever), also commenced to subside. Desquamation began about the tenth day, and some of the masses of epidermis thrown off were an inch square. This continued actively for the next week, and during this period desquamative nephritis set in, as indicated by the condition of the urine, which contained about one tenth part albumen. General anasarca also resulted, and was first noticed on the fourteenth day. By the end of the fourth week, however, the infant had entirely recovered from the attack.

On account of the unfortunate results following the exposure of this family to the risk of contracting scarlatina, Dr. Leah thought it his duty to utter a solemn note of warning about the danger to parturient women from the contagion of this disease, and the urgent necessity for preventing the exposure of such patients to it in every possible way. He felt it the more important to do this from the fact that from time to time communications were published in which this danger was entirely underrated, and it was only that very day that he had read an article in the *Journal of the American Medical Association* for April 19, 1884, condensed from one in the *Practitioner*, which he thought likely to be productive of much mischief. In it the writer advanced the following points: —

"(1.) Cases have over and over again been reported where there have been cases of scarlatina, not only in the same house, but in the same room, and even in the same bed, with the parturient woman, without the occurrence of any ill effects.

"(2.) I have been credibly informed by a medical man that he was once called away from a case of scarlatina he was watching to attend two cases of midwifery, and that neither of the lying-in women had any unfavorable symptoms afterwards.

"(3.) I have also been told, and my informant is willing to swear to the fact, that one medical man attended three cases of confinement when his hands were freely peeling from scarlatina, and that not one of these cases had anything the matter subsequent to their confinement."

In connection with the above, Dr. Leah related an account of a soldier he had known of in the late war, who, during a battle, was left exposed between the fires of both armies, and yet who, although he actually received twenty-six bullet wounds, did not die. As well might one argue from this that the man was in a safe position, he said, as contend from the instances mentioned that there was no danger to the parturient woman from scarlatina. He maintained, however, that the cases of puerperal septicæmia in which there was a more or less well-developed eruption resembling that of this disease were not instances of true scarlatina.

As to the occurrence of scarlatina in the fœtus in utero there were now a number of well authenticated cases on record, both in this country and in Europe, in which the most strongly marked characteristics of the disease were found present upon the child at birth. At the same time many medical men of the largest experience had stated that they had never met with a single instance of it. Thus, Meigs and Pepper mentioned that the earliest age at which they had seen a perfectly well marked case of scarlet fever was twenty-one days. Vogel stated that very young children were not subject to the disease, but the statistics of Murchison showed that of 148,829 deaths from scarlatina in England and Wales in 1847, and from 1855 to 1861, no less than 9999, or about seven per cent., were in children under one year. In the city of New York, again, there were 734 deaths from the disease in the year 1883, and of these 67 were in children under one year. Voit reported the case of a child, born on October 3, 1856, who was taken sick with scarlatina on the

17th, after the brother, eleven years old, had been attacked with the disease on the 1st of October. Meynet told of a woman who, three weeks after the convalescence of her husband, and three months after the death of her child, from scarlatina, was delivered of a girl who was somewhat red when born; the redness becoming more intense on the following day, and the skin feeling very hot. These symptoms diminished after a few days, but again became more intense on the thirteenth day. On the fifteenth day Meynet noticed the well-developed redness of scarlatina on the whole body, the tongue and the palate; the tonsils were swollen, and there was fever and apparent difficulty of deglutition. On the seventeenth day the redness had almost entirely disappeared, and the general condition was good; but during the subsequent fortnight there seemed to be no desquamation, and this made the case somewhat doubtful. A case reported by Asmus was also doubtful, as desquamation frequently appeared even in healthy newborn children in whom there was no suspicion of scarlatina. It was as follows: A mother had lost two children towards the end of her pregnancy from scarlatina, and soon after her confinement became dropsical. In her new-born child, who was very much emaciated, the epidermis over the whole body separated in large sheets, and from the hands it came off like gloves; the infant afterwards recovering completely. Potier observed that a woman took scarlatina on the day of her confinement and died a fortnight afterward, and that her child, though isolated immediately after birth, became affected with intense scarlatina. Küpfer met with a scarlatinous patient two months old, Voit one two and one half months old, and Haller one five months old, while Fleischmann saw none under six, and Eulenburg none under eight, months old.

Prof. Louis Thomas, after stating that he had himself never met with the disease under the age of five months, went on to say that it was difficult to ascertain whether children were born with scarlatina, because the majority were born with a red or yellowish-red skin, which resembled the eruption of scarlatina, and was followed by desquamation; but as children were born of variolous mothers, or of women who during pregnancy had been exposed to the contagion of small-pox, and at birth had been found affected with the disease, he could not see why this should not also happen in the case of scarlatina. According to Noirot, Baillou, as early as 1574, established the occurrence of such cases, and Farrario had also published an undoubted case. According to Naumann, the latter saw several cases. Tortual reported the case of a woman, thirty years old, who had never had scarlatina, and who, after nursing her husband and son, who were sick with the disease during the eighth month of her pregnancy and up to shortly before her confinement, was delivered of a male child on the 19th of September, 1823, which could not swallow and had an uncommon redness of the skin. This Tortual did not hesitate to regard as the characteristic eruption of scarlatina, especially as the tongue and mucous membrane of the mouth, in addition, were of a glistening red color. The difficulty of deglutition continued until the fifth day, when the child drank eagerly, and on the ninth day abundant desquamation commenced, just as in older children. Later, also, a separation of the nails of the fingers and toes took place, but the child recovered completely. During an epidemic of scarlatina a son was born to Gregory on April 23, 1839, who was evidently suffering from some form of fever, and on the following day the child had a decided angina maligna, without an exanthem, as a result of which it emaciated and died on May 1st. Stiebel related that a woman, twenty-five years old, manifested a very abundant eruption of scarlatina towards the close of her pregnancy, and that after birth the child could not swallow, while its skin was of a scarlet-red color and desquamated in larger scales than usual. Hüter mentioned the case of a woman who, during an epidemic of puerperal fever, gave birth to a child affected with the most clearly marked scarlatina in the stage of eruption, the woman herself dying four days afterward of metrophlebitis. In the year 1828 Trousseau was appointed at the head of a commission to investigate a serious outbreak of scarlet fever in a rural district of France, which was especially fatal to puerperal women. In thirty-six cases the women were attacked within forty-eight hours after labor, and died in a few days, and one practitioner lost no less than nine of his lying-in patients. Ernst Wagner, of Leipsic, had expressed the opinion that the fœtus might be ill with such diseases as scarlatina and small-pox without the mother being affected.

Of late years, Dr. Leah went on to say, scarlatina had been increasingly prevalent and fatal in New York. During the twenty-five years before 1829 there were only 111 deaths reported from it altogether; but in the last three months of 1829 alone there were 124 deaths from it, an increase which caused much alarm among the citizens. During the last eighty years there had been 37,271 deaths from scarlatina in New York; but the slowness of increase in their number for a time was worthy of notice. In 1804 there were 14 deaths, but in the twenty years following there were never more than five deaths *per annum*. In 1824 there were but three deaths from it. During the past twelve years, however, there had been several severe epidemics of the disease, and in 1882 the mortality from it reached 2066. Hillier's statistics showed a mortality of 52,464 during the years from 1848 to 1866, and Meigs and Pepper stated that the number of deaths from it from 1809 to 1868 in Philadelphia was 13,116.

Although Dr. Leah had met with three cases of undoubted scarlatina in puerperal women, he had seen but one case of it in the fœtus, the one whose history he had related in detail. Two of the cases of puerperal scarlatina had occurred in his own practice, and the third in a patient of the late Dr. Peaslee, whom he had been called to see on account of the sudden onset of convulsions. The child died two minutes after birth from the accumulation of mucus in the air-passages, and the mother died on the third day afterward. He then stated that he had endeavored in vain to find at the New York Health Department any records of scarlatina occurring in pregnant and puerperal women or in the child at birth; but Dr. Naegle, the registrar of vital statistics, had informed him that during the year 1883 sixty-seven deaths from the disease were reported in children under one year old, and nineteen cases in females in the child-bearing period of life. Between the ages of fifteen and twenty years there were six cases; between twenty and twenty-five, four cases; between twenty-five and thirty, six cases; between thirty and thirty-five, two cases; and between thirty-five and forty, one case.

At a meeting of the Obstetrical Society of Philadelphia held April 3, 1884, Dr. W. T. Taylor stated

that he had had a case of scarlet fever in a mother which came on two days after labor, and proved fatal, though the child escaped. As a rule, however, Dr. Leah said, the disease was not nearly so fatal when it occurred after, as when it commenced before or during, labor. In one of the three cases to which he had referred the attack came on one week after the birth of the child (which escaped), and the mother recovered.

DRS. WILLIAM DETMOLD and J. W. S. GOULEY spoke of the condition of the kidneys in scarlet fever as rendering the disease peculiarly dangerous to the parturient woman (in whom there was usually considerable renal congestion and interference with the abdominal circulation), and, therefore, of immense interest to the obstetrician.

DR. DWYER said he had met with one case of puerperal scarlatina, in which the woman was seized with eclampsia and died at the moment that the child was born. He had also met with three cases in which pregnant women nursed children suffering from scarlet fever, but were not taken with it themselves, while the infants afterward born to them also escaped.

DR. W. T. LUSK thought it was a matter of great interest that women if exposed to the contagion of scarlet fever while pregnant rarely developed the eruption and other characteristic signs of the disease until the approach of labor or after the birth of the child; the period of incubation being unusually long, or the scarlatina poison remaining dormant in the system until the termination of utero-gestation. In scarlatina in parturient women the symptoms also generally differed in a marked degree from the ordinary type. Thus, the eruption and the fever often made their appearance simultaneously, and in a large proportion of cases there were no throat-symptoms; while many of the cases died before the manifestation of any kidney-trouble. That there was a scarlatinous rash due to septicæmia, and independent of exposure to the contagion of scarlatina, he had his doubts; and he had certainly never observed such a phenomenon himself, although he had had an unusually extensive experience with puerperal fever of various forms. As a rule, he had found that puerperal scarlatina was not associated with peritonitis or cellulitis. This disease was usually regarded as peculiarly fatal; but he was inclined to think that, as in the case of scarlet fever in children, the result depended a good deal on the general character of the epidemic prevailing at the time and the special circumstances of the individual case. Dr. Lusk then alluded to the investigations of Braxton Hicks, who had found that many of the cases of puerperal scarlatina closely resembled ordinary puerperal septicæmia, having none of the characteristic features of scarlet fever in general; and stated that in England instances had been reported in which children had contracted ordinary scarlet fever from such cases. No case of this kind, so far as he was aware, had as yet been reported in this country; and the records of the New York Health Department for nine years showed no proportionate relation between the number of deaths from puerperal fever and those from scarlet fever. Matthews Duncan had found the same thing true in London; but at the same time Braxton Hicks might still be correct in his views, the matter as yet not being definitely settled. Under any circumstances, however, he thought the practitioner of midwifery could not be too cautious, and that if in any case where he had gone from a scarlet fever patient to attend a confinement the result proved bad, the physician could not but reproach himself, whatever the woman died of. Any one who was skeptical about this matter would be likely to be very severely punished sooner or later, and there had been one or two cases in the earlier part of his own practice which had taught him a lesson that he would not be apt to forget soon.

DR. S. T. HUBBARD said he had had but one case of puerperal scarlatina in his practice. The disease, which was perfectly characteristic in its manifestations, did not come on till the third day after labor, and the patient died on the third day following the appearance of the eruption. The child also died when four or five days old. He was not able to trace the origin of the disease in this case. He had always made it a special point to refrain from attending lying-in cases when treating scarlet fever patients, and thought this was the duty of every practitioner of midwifery.

DR. C. S. WOOD was inclined to doubt the extreme danger to the puerperal woman of the contagion of scarlet fever. When the disease occurred in families of pregnant women who had never had it, he had formerly been accustomed to await the approach of labor with much anxiety, but his experience had convinced him that the danger had been exaggerated. Thus, a mother who had nursed a child suffering from scarlet fever for twenty-one days was confined ten days after the expiration of the twenty-one days, and passed through the puerperal period in a perfectly natural manner, while the new-born child also escaped contracting the disease. He had been engaged in the practice of medicine for thirty-five years, during which he had had a large experience with scarlet fever; but he had never seen a case in which the contagion was carried by himself.

Remarks were also made by several other members; after which DR. LEAH said that he thought there was a plain distinction between puerperal scarlatina and ordinary septicæmia; the evidence showing positively that scarlatina was not due to septicæmia. Thus, in the case of the family whose history was reported in the paper, the mother had scarlet fever before the child was born, the child was affected with the disease when delivered, and the monthly nurse contracted it. As to the susceptibility of puerperal women to get scarlet fever, he did not think this was very great, and this was due to their age, as well as to the fact that many of them had had the disease in childhood. But although it did not occur very frequently, the point which he wished particularly to impress was, the extreme danger of scarlatina when it was contracted during the puerperal state, and hence the great importance of preventing all exposure.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

OCTOBER 13, 1883.

SEA VOYAGES AND AMENORRHŒA.

DR. CHADWICK reported cases.

DR. INGALLS suggested that the functions of other organs were equally liable to be disturbed by the voyage, which might, therefore, reasonably be expected to exert some influence upon the menstrual function, the regularity of which, he had reason to believe, was also not infrequently disturbed by long journeys by rail.

Dr. Brown said that he had seen at the City Hospital several cases of the kind cited by Dr. Chadwick, occurring mostly in the grade of newly arrived known as "assisted emigrants." He had learned to recognize, in the emigrant, the facies indicative of menstrual deficiency. The majority of these cases had been those in which the catamenia had been arrested during the voyage and had not returned, usually accompanied by constipation, anæmia, and general malaise.

Dr. Richardson said he could add his testimony to that of Dr. Chadwick, and that it was very common at the Massachusetts General Hospital to see young women with amenorrhœa which had apparently resulted from the voyage, as often when they had not been unwell on the voyage as when occurring and arrested during the journey. There were no symptoms of pregnancy; a few have had headaches and backaches, as in suppressed menstruation.

Dr. Lyman observed that a distinction should be made between those cases in which the function was normally performed and those habitually irregular before the voyage. In the former, if menstruation occurred during the voyage, the flow was apt, as a rule, to be excessive, but without any subsequent irregularity, while in the latter the subsequent irregularity was likely to be well marked, in one case menorrhagia for months afterward, while in another amenorrhœa, persisting for some months even, was not an unusual result, the cases of amenorrhœa being those in whom the menstruation was missed at its regular period during the voyage. These were generally young unmarried women. Such cases are quite commonly occurring in hospital practice among recently-arrived emigrants.

Dr. Sinclair inquired as to the effect of sea voyages upon Americans, going and coming.

Dr. Sinclair expressed his belief that in the case of the emigrants there was a strong element of nervous disturbance, due to leaving home. He had known such girls to go six months without menstruating. It was not exactly home-sickness, although there was a trace of this in the mental condition. The cause, he believed, was often to be sought beyond the sea voyage.

A MOTHER THIRTEEN YEARS OF AGE.

Dr. Cushing reported the case of a girl thirteen years and seven months old who had never menstruated but once, and had only once had connection, as she declared, who gave birth at term to a healthy child weighing seven pounds. She had an easy labor and a good getting up.

PODALIC VERSION, AND ABDOMINAL PRESSURE UPON THE AFTER-COMING HEAD.

Dr. Green reported a case which was of interest as illustrating, first, the advantage of version over the high-forceps operation in certain cases, and, second, the value of abdominal pressure as an aid in the delivery of the after-coming head. A multipara had been in labor some fifteen hours; the os was dilated, the membranes unruptured. The pelvis was found to be slightly flattened; the head had not engaged, but had extended and presented the brow; occiput left anterior; the child was large; fœtal heart not heard. The membranes were then ruptured, the head flexed, and forceps applied. Two efforts to extract were then made, when it was found that the head had again extended. Podalic version was then determined upon, and performed without difficulty; extraction was easily effected until the head reached the superior strait, from which the usual methods did not succeed in dislodging it. The student, whose case it was, was then directed to apply both hands over the fundus and to exert strong, evenly distributed pressure downward; thus aided by the powerful *vis a tergo* Dr. Green was enabled to accomplish extraction. The fœtus was partially asphyxiated, but was resuscitated after half an hour's effort; it weighed eleven and one quarter pounds. Both mother and child did well.

Dr. Blake said that his experience, which had been large, had been exactly opposite. In the case as reported by Dr. Green he would have spent an hour with the forceps trying to deliver the child in order to save it. In version is the risk, especially in the delivery of the head, where the pressure upon the neck or the head is often extreme. He had had, recently, a similar case, in which the head did not enter, and he concluded to try forceps, — Elliot's. The patient was placed first upon her back, then upon the side, when, after a tremendous amount of exertion, Dr. Blake succeeded in delivering a living child. Is there not danger to the uterine tissues, suggested Dr. Blake, from the pressure made externally? In one such case the woman died, and there was some doubt whether external pressure and consequent injury to the wall of the uterus might not have contributed to the fatal result. He would certainly never think of trying version until having given forceps a fair trial.

Dr. Green said he intended to restrict the question to pressure upon the after-coming head, the body being born, when two hands will clasp the head with a uniform, even pressure.

Dr. Richardson said he would side with Dr. Green in this question. Formerly having favored forceps against version in such cases, during the past four or five years his opinion had been gradually but surely undergoing a change, so that now he would rarely try forceps in a narrowed brim; he would do version in place of the high application of the forceps. His reason was that version is easy till the head is reached, and this is manageable if controlled during the process. Dr. Richardson reported a case to which he was called to do craniotomy, and version was performed in ten minutes, aided by steady, uniform pressure upon the head, so directed as not to compress the uterus. The child's life was thus saved. In the lying-in hospital he had not done high forceps for four or five years, and did not remember a still-birth from version during that time.

Dr. Green said that one great advantage of version over long forceps lay in the fact that the after-coming head entered the pelvis by a smaller diameter than the first-coming head, owing to its wedge-shaped conformation. He believed that a careful, tenative use of the forceps was permissible in slightly flattened pelves, but thought that version was a safer operation for both the mother and child when one or two well-directed efforts with forceps had been unsuccessful.

Dr. Richardson remarked that there was a scientific objection to the use of forceps high up, inasmuch as the difficulty lies antero-posteriorly, while the application of the blades is lateral, and these cannot exert so much power nor to the best advantage in that position.

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THE CÆSAREAN SECTION AS PERFORMED BY SAVAGES.

THE tendency of late years to study the natural history of disease has extended itself to the phenomena of labor, and an attempt has been made to gather hints for rational obstetric practice from cases where nature has her most perfect work. Numerous descriptions have been published by various observers. Especially much of ethnological as well as medical interest is embodied in the recent compilations of Dr. Engelmann, of St. Louis. The latest contributor in this field is Mr. R. W. Felkin, who read a paper on Labor in Central Africa before the Obstetrical Society of Edinburgh, in January, which is published in the *Edinburgh Medical Journal* for April.

The usages in the various tribes differ widely. In one the woman sits on a fur spread over deep sand, which "supports" at once her perinæum and her back. In several a semi-erect position is taken, with the feet raised on a sort of stirrup, while attendant men or women compress the abdomen more or less energetically by swathes or by direct pressure. Sometimes the woman kneads her abdomen over the blunt end of a post fixed in the earth. In some tribes when the labor is delayed the patient sits over a pot with boiling herbs, which in turn is over a fire in the earth. The rising vapor is supposed to soften the unyielding passages, and conduce to an easy labor. In other tribes the women support themselves from a high horizontal bar by the hands, and bring forth their child while in a standing posture. In short, all sorts of positions are adopted, many of which are similar to those which have been made familiar to us by descriptions from other sources. It is interesting to note that this writer does not find that labor is, as a rule, the easy and painless matter among these women that some have supposed.

In a few of the tribes the writer found abdominal section to be practiced. Indeed, it seemed the only obstetrical operation that was known. In one village preparation had been made to perform this operation on a young woman who had been two days in labor, but whose only trouble was uterine inertia. Mr. Felkin, with much difficulty, prevailed upon the friends to allow him to put on the forceps, and delivered the woman without difficulty, to their great astonishment. In Uganda alone among the countries of Central Africa abdominal section is practiced with the hope of saving both mother and child. The author gives a description of this operation as he saw it performed there, and one cannot but be struck with the remarkably intelligent and successful manner in which it was done, considering the intellectual status and surroundings of the operator. Any comparison between the advantages enjoyed by a "surgeon" like this savage of Uganda and those renowned Arabian physicians, for instance, of the early centuries of our era, whose works have come down to us, is out of the question; yet we do not recall any professional achievement ascribed to Avicenna or Averroes which was more creditable than this operation of the savage of Central Africa. Believing it will be of interest to our readers, we make room for Mr. Felkin's description: —

"The patient was a fine, healthy-looking young woman of about twenty years of age. This was her first pregnancy. I was not permitted to examine her, and only entered the hut just as the operation was about to begin. The woman lay upon an inclined bed, the head of which was placed against the side of the hut. She was liberally supplied with banana wine, and was in a state of semi-intoxication. She was perfectly naked. A band of mbugu or bark cloth fastened her thorax to the bed, another band of cloth fastened down her thighs, and a man held her ankles. Another man, standing on her right side, steadied her abdomen. The operator stood, as I entered the hut, on her left side, holding his knife aloft with his right hand, and muttering an incantation. This being done he washed his hands and the patient's abdomen, first with banana wine and then with water. Then, having uttered a shrill cry, which was taken up by a small crowd assembled outside the hut, he proceeded to make a rapid cut in the middle line, commencing a little above the pubes, and ending just below the umbilicus. The whole abdominal wall and part of the uterine wall were severed by this incision, and the liquor amnii escaped. A few bleeding points in the abdominal wall were touched with a red-hot iron by an assistant. The operator next rapidly finished the incision in the uterine wall; his assistant held the abdominal walls apart with both hands, and as soon as the uterine wall was divided he hooked it up also with two fingers. The child was next rapidly removed, and given to another assistant after the cord had been cut, and then the operator, dropping his knife, seized the contracting uterus with both hands, and gave it a squeeze or two. He next put his right hand into the uterine cavity through the incision, and with two or three fingers dilated the cervix uteri from within outwards. He then cleared the uterus of clots and the placenta, which had by this time become detached, removing it through the abdominal wound. His assistant endeavored, but not very successfully, to prevent the escape of the intestines through the wound. The red-hot iron was next used to check some further hæmorrhage from the abdominal wound, but I noticed that it was very sparingly applied. All this time the chief 'surgeon' was keeping up firm pressure on the uterus, which he continued to do till it was firmly contracted. No sutures were put into the uterine wall. The assistant who had held the abdominal walls

now slipped his hands to each extremity of the wound and a porous grass mat was placed over the wound and secured there. The bands which fastened the woman down were cut, and she was gently turned to the edge of the bed, and then over into the arms of assistants, so that the fluid in the abdominal cavity could drain away onto the floor. She was then replaced in her former position, and the mat having been removed, the edges of the wound, that is, the peritonæum, were brought into close apposition, seven thin iron spikes, well polished, like acupressure needles, being used for the purpose, and fastened by string made from bark cloth. A paste prepared by chewing two different roots and spitting the pulp into a bowl was then thickly plastered over the wound, a banana leaf warmed over the fire being placed on the top of that, and, finally, a firm bandage of mbugu cloth completed the operation.

"Until the pins were placed in position the patient had uttered no cry, and an hour after the operation she appeared to be quite comfortable. Her temperature, as far as I know, never rose above 99.6° F. except on the second night after the operation, when it was 101° F., her pulse being 108.

"The child was placed to the breast two hours after the operation, but for ten days the woman had a very scanty supply of milk, and the child was mostly suckled by a friend. The wound was dressed on the third morning, and one pin was then removed. Three more were removed on the fifth day, and the rest on the sixth. At each dressing fresh pulp was applied, and a little pus which had formed was removed by a sponge formed of pulp. A firm bandage was applied after each dressing. Eleven days after the operation the wound was entirely healed, and the woman seemed quite comfortable. The uteriue discharge was healthy. This was all I saw of the case, as I left on the eleventh day. The child had a slight wound on the right shoulder; this was dressed with pulp, and healed in four days."

ETHERIZATION BY THE RECTUM.

The administration of ether by the rectum has attracted much attention in Boston as well as in other places during the past fortnight. The advantages of such a mode of administration in certain cases would evidently be very great. It would render it possible to maintain perfect anæsthesia during operations about the head and face without incommoding the operator by the presence of the etherizing apparatus in the field of operation. Such a condition might well be purchased at the cost of some other inconvenience. Some of the operations about the face are rendered peculiarly trying by the struggles of patients just sufficiently out of ether to blindly struggle, and the length of such operations is sometimes greatly prolonged by the necessity of stopping frequently to renew the anæsthesia. The new method promised freedom from these difficulties. It promised at first still more, for it seemed to present certain advantages. It diminished in certain cases the stage of excitement and reduced to a minimum the tendency to vomiting and did away with the uncomfortable local effects that sometimes followed the contact of the vapor with the throat and air passages. Such at least was the inducement to try the new method held out by the report of Dr. Mollière, of Lyons, which first drew attention to the subject in this country, and the earlier cases, in Boston at least, confirmed the impression; but subsequent experience has shown that if there are advantages there are also grave objections to the method. In many cases the effect has been out of proportion to the amount used, the ether continuing to be absorbed after anæsthesia was already complete until it became profound, sufficient in certain cases to cause anxiety. In these cases in which the insensibility grows deeper and deeper, it is impossible to withdraw the anæsthetic. A rectal tube fails to evacuate any sufficient quantity of gas, and one can only have recourse to stimulants and general measures until the effects have passed away. This prolonged effect has followed the smaller doses and in patients where there was no reason to expect such results. These cases have not rallied easily. In doing away with the local difficulties about the air passages other local difficulties have shown themselves in the rectum and bowels. The diarrhœa has in some cases been marked, and occasionally blood has been passed in sufficient quantities to prove serious, while the vomiting has also been in these same cases quite as severe as in patients anæsthetized in the usual manner. In addition, certain cases have proved quite intractable to the new mode of administration within any reasonable time, and inhalation has been added. A very few inspirations in addition to the amount absorbed by the bowels have proved sufficient.

In general the amount of ether necessary has been small; about two ounces has ordinarily proved sufficient to induce insensibility, though much larger quantities have been administered, and unpleasant symptoms have followed even from that small amount. From New York comes the account of a case, in which two ounces were administered to a child of eight months, in which bloody discharges and death occurred during the following night.

It is unnecessary to pursue the subject farther to show that these grave objections to the method will preclude its general use. Possibly it may be retained as an occasional adjuvant to the ordinary method, but it is not likely to come into general use as the ordinary method of inducing anæsthesia.

The present experience has been sufficient to formulate the following rules, which should guide any one desirous of using the new method, until further experience modifies them: —

Rectal etherization should be reserved for cases in which there is some special objection to the administration by inhalation.

It should be made use of only with robust adults.

In general two ounces should be regarded as a sufficient dose: that dose should be exceeded only with great caution.

When insensibility is fairly established the administration should be stopped.

THE NEW YORK STATE ASYLUM FOR INSANE CRIMINALS.

THE twenty-fourth annual report of the superintendent of the State Asylum for Insane Criminals at Auburn shows that during the last fiscal year 178 patients were treated, of whom 168 were males, and ten females; that two died, and that twenty-nine were discharged. Of the latter number fifteen men and one woman had recovered. The percentage of deaths was 1.13 of the whole number treated, and 1.36 of the average daily population, this being the fifth time in the history of the asylum that the death-rate has fallen below one and one half per cent. of the average daily number under treatment. The report states that during the year no form of mechanical restraint has been used, nor has the necessity of seclusion, as a means of restraint, been of frequent occurrence, the daily average of seclusion for the year being but a little over one half of one per cent. The daily average number of patients to whom medicine was administered for the purpose of inducing sleep was less than one tenth of one per cent. (.093).

In January, 1883, the manufacture of shoes and slippers for the men was commenced, and has been in successful operation ever since among some of the patients. An effort has also been made to provide further occupation to such of the patients as are desirous and able to work, and who are likely to be benefited thereby, by sending them out on farms in the vicinity of the asylum to work on shares. Care is exercised in the selection of patients in order that only those who can be relied on to conduct themselves properly may be allowed to go, each party sent out being in the charge of one or more responsible attendants who usually work with them. In speaking of this the superintendent, Dr. Carlos F. MacDonald, says: "While no money consideration has been asked or received for the labor of patients the asylum has undoubtedly been pecuniarily benefited by the proceeds thereof in the matter of supplies obtained, but this should be regarded as of very secondary importance in comparison with the marked benefit, mentally and physically, which the patients themselves have obtained from being thus pleasantly and usefully occupied. In fact, a noticeable improvement has been observed in the condition of every patient sent out to work, while in two instances complete restoration of mind resulted where recovery was not expected. Applications for permission to go, on the part of patients, were so numerous that some had to be denied, and all who obtained the privilege evinced their appreciation thereof by uniform good conduct and satisfactory work. The effort to provide occupation for the patients in the manner described was experimental, and had to be carried out under embarrassments and anxieties that would not be encountered if the asylum were located on, or had under its control, a farm whereby its inmates could obtain healthful and necessary occupation, and the institution the full benefit of their labor, without exposing them to the gaze of morbid curiosity or subjecting the asylum to the charge of competing with outside labor. The satisfactory results of the experiment would seem to demonstrate beyond question the necessity of providing the institution with a farm for the benefit of its inmates."

MEDICAL NOTES.

— Drs. H. J. Bigelow and R. M. Hodges have resigned their position as surgeons at the Massachusetts General Hospital.

— On the 21st of April numerous petitions were sent to the United States Senate calling for the passage of a bill "Requiring the Employment of Different Schools of Medicine in the Government Service." The returns made to the Michigan State Board of Health of medical practitioners in that State represent some seventy-five different "schools" of medicine, among them the "Indian," the "Cureopathic," etc. If Michigan can furnish seventy-five schools, when the other States are heard from there will probably be enough schools to "go around" for all the places.

— The native officials in Egypt are found by the representatives of the English government to be rather lax in the performance of their duties. Recently one of the native governors neglected to report to the authorities some cases of cattle plague which he had been instructed to look out for, and which had occurred in his district. He was immediately removed from his office to serve as a warning to the others. The warning succeeded beyond expectation. The other governors all forthwith sent statements of extensive epidemics in their districts, which naturally alarmed the authorities. On investigation it was found that these cases were purely figments of the imagination. The governors had learned that what had cost the delinquent his place was lack of reports of cattle plague, so they were resolved to be on the safe side.

— We find the suggestion in a contemporary, of holding the hands over strong aqua ammonia for a moment as a ready means of ascertaining the existence and location of small abrasions needing a touch of the caustic before holding a post-mortem examination; the smarting will quickly reveal all the sensitive or abraded places, however minute.

— At a recent meeting of the Medical Society of Columbia the president laid before the Society an examination of urine which a man, calling himself Dr. W. H. Hale, had made for a very intelligent patient. It is vouched for as an actual copy: "Analysis of Urine. — Specific gravity 120; excessive alaline; hippuric acid, 7 to 10 per cent.; traces of nerve-casts; acid reaction; temperature 93°. — W. H. HALE."

— We are requested to warn the medical fraternity against a very plausible impostor representing himself as a physician from South Carolina accidentally in want.

NEW YORK.

— At the last meeting of the County Medical Society, held Monday evening, April 28th, Dr. Joseph A. Andrews read a paper on Trachoma, and the Æti-

ology of Jequirity Ophthalmia, in which he stated that after a series of very careful experiments he came to the conclusion that Sattler's claim, that the disease was due to a special micrococcus, could not at present be substantiated; although it was possible that it might depend on such a micro-organism. At all events it seemed probable that the affection was really promoted by micrococci of some kind. The essential cause of jequirity ophthalmia was probably a ferment developed after the application of the agent to the eye. Dr. Knapp coincided in the opinion that the latter was produced by a chemical poison rather than a bacillus, and the discussion of the paper, which was brought to a close by Dr. Andrews, was also participated in by Drs. Pooley, Gruening, and Brandeis. On motion of Dr. A. Jacobi the approval of the Society was recorded of a bill entitled An Act to Provide Additional Accommodations for the Common Schools in the City of New York, the passage of which had been recommended by the Board of Education, and which provides that bonds to the extent of $2,000,000 should be issued by the city for the purpose named.

— At the last meeting of the Board of Health Sanitary Superintendent Day presented a report embodying the results of an investigation in regard to the adulteration of coffee by poisonous coloring matter. From this it appeared that for years green Gautemala and Maracaibo coffee had been taken to certain mills in Brooklyn and treated in this manner to make them resemble Government Java. The analysis of the coloring matter showed that it contained considerable quantities of arsenic and lead, and among its ingredients were chromate of lead, ferro-cyanide of potassium, yellow ochre (which frequently contains arsenic), umber, Venetian red, lamp-black, gum Arabic, soap-stone, and charcoal. It was estimated that every cup of coffee made from "Java" coffee prepared in this way contains one sixtieth of a grain of arsenious acid. It was further discovered that Rio coffee, which is apt to have a dull-gray color in the bean, was frequently placed in a large revolving cylinder and treated with a mixture of chrome yellow and Prussian blue, by which it is colored a handsome green. The Board at once took action in regard to the suppression of these criminal and dangerous practices.

— Dr. Elwyn Waller, chemist to the Health Department, has submitted to the Board a report of the analyses made by him of five samples of ordinary vinegar pickles obtained from different dealers. In all the samples analyzed it was found that an injurious proportion of copper, ranging from nine to two parts in one hundred thousand, had been used for coloring purposes.

— On the afternoon and evening of April 29th a kirmess, or Dutch fair, was held at the Metropolitan Opera House in aid of the New York Skin and Cancer Hospital. Having many attractive features it was a great popular success, and, no doubt, netted a large sum for the institution named. This hospital has secured a tract of land covering nearly one hundred and fifty acres, just beyond the city line, and it is expected that by midsummer cottage pavilions will be erected sufficient to receive any patient with cancer who may require assistance, whether the case is recent and suitable for operation or chronic and hopeless. For this purpose a fund of $100,000, which will cover the entire cost of the land and the erection of accommodation for one hundred patients, and a considerable portion of which has already been subscribed, is now being raised. The present city building in East Thirty-Fourth Street will still be continued as a reception hospital and for out-door clinics. The proceeds of the kirmess go to the "charity fund," under the management of the Ladies' Auxiliary Board, by means of which the managers are placed in a position never to refuse admission to any suitable case on account of poverty. Mr. John Jacob Astor has recently given $200,000 towards the proposed institution for the treatment of cancer alone, which those connected with the New York Skin and Cancer Hospital have used every effort to have united with their own, but thus far without success.

— On the 29th of April it was reported that there had been sixteen deaths from scarlet fever in the village of Canandaigua within eight days, and that the local Board of Health had issued an order prohibiting public funerals, and recommending the adoption of other needful sanitary precautions.

— A male child is said to have lately been born at West Troy having three perfectly formed legs, the third protruding above the right hip. In the opinion of the medical men who have examined it the extra limb can be satisfactorily amputated when the child gets stronger.

Correspondence.

LETTER FROM WASHINGTON.

Messrs. Editors, — The medical profession in Washington have just finished the spring round of college commencements, hospital fairs, etc., in time to welcome with the first week of spring weather their friends among the visiting physicians, who are arriving here rapidly. The Medical Department of Georgetown University held its commencement on April 30th, granting diplomas to seven graduates. Like all others of its class the attendance was very large, with the usual accompaniments of music and flowers. The Washington Training School for Nurses, on May 2d, graduated four nurses, quiet, refined, and earnest-looking women. The exercises were held in a church building (All Souls) generously loaned for the occasion, and in the presence of a small but appreciative audience. Very few medical men outside of those actually interested in the school were present, but the addresses, which were from Prof. D. W. Prentiss, the president of the Board of Trustees, Dr. P. J. Murphy, the surgeon-in-charge of the Columbia Lying-in Hospital, and Dr. W. W. Godding, superintendent of the Government Hospital for the Insane, were all worthy of the occasion, and merit earnest consideration. There are two classes who can make such a school prominent, the profession first, and the women of the community. Here the first class have not had as yet the opportunity for appreciating a first-class nurse except in occa-

sional cases in private practice, for the simple reason that there are no hospitals of any size which create a demand for them. Providence Hospital is under the nursing of Sisters of Charity. The Columbia Hospital can accommodate but a few, and from its peculiar field of labor the profession generally sees but little of its workings. The Freedmen's Hospital also takes a few, but its wards are not utilized by the mass of the profession. What the new Garfield Hospital is going to do remains a problem. Its friends believe that it will grow in importance and usefulness, as there is a positive need for it, and will before long furnish a suitable field for professional growth. The women could do a great deal, but they are already overburdened with entertainments for the benefit of the Children's Hospital, which should have been mentioned with the others as a small but well-defined field for nurse-training, of the Garfield Hospital, church orphanages, etc., etc., which task their ingenuity and time very seriously. To be a success such enterprises must become fashionable; perhaps some day the Nurses Training School may attain to that proud distinction.

Writing of fashion, doctors' lunches have become quite the thing. We have had two here recently, one given by Dr. Toner to Dr. Warren Bey, and the other by Dr. Jos. Taber Johnson to Dr. Mundé, of New York, and very enjoyable affairs they were, only Johnson's punch was a little too strong to be taken in the middle of the day by any one who still had his rounds to make. A conversation on this subject was overheard as occurring between two ladies: "What are all these doctors' buggies doing here?" "It is a doctor's lunch, my dear." "A doctor's lunch! Well I never heard of doctors stopping to have a formal lunch before."

The American Surgical Association were certainly favored by Dame Nature during their meeting here this week. All the foliage was well out, and everything looks fresh and bright, and even the heat, with the exception of one day, Friday, was tempered to an agreeable degree. The city is looking its best now, and may give to some others of our medical neighbors the desire to reside permanently among us, when they retire from active practice, of course, and follow in the footsteps of Dr. Hammond, who is said to be about to build a marvel of a house on the Mexican plan, with a large central court roofed in with glass, etc. The late Dr. Marion Sims we know also intended to take up his residence here.

The meetings of the American Surgical Association were held in a large room in the National Museum, and surrounded by the park of the Smithsonian Institution. The room was so arranged that by a series of large screens the small body of men — for the attendance was not large — could be shut off quite satisfactorily from the empty space around, and the screens served the purpose of sounding boards, not as well as could be wished however; and as work is still going on in different parts of the open building an occasional sound would reverberate through into the room, annoying Dr. Flint, of the navy, who was exerting himself to relieve the meeting of all such disturbances. An occasional group of visitors would lounge in from the main hall, take a look at the Indian pictures which hung on the walls, and after listening for a few moments pass out, evidently thinking that the other curiosities were of more interest. Dr. Basil Norris, of the army, who was chairman of the Committee of Arrangements, seemed to be always on hand and rendering himself particularly useful and agreeable.

Very few of the Washington medical profession seemed to be present, and a number of faces were missed from the assemblage, such as Professor Gross and his son, Dr. J. C. Warren of your city, and others; but the general impression given, which was heightened by the manner and appearance of the President, Dr. Moore, of Rochester, N. Y., was that of a quiet, dignified, and earnest body of men, and the papers read and discussions held upon them partook of the same character; but as they will be fully reported in your columns elsewhere it is not necessary to particularize them here. Among those present, however, we must mention J. S. Billings, M. D., LL. D. (Edinburgh), U. S. A., whose latest honors do not seem to embarrass him. Think of a man leaving this country on April 2d, going to Edinburgh and participating with honor in the tercentary of her University, and being back at his post on April 30th, in twenty-eight days.

Professor Gross's paper, which was on Wounds of the Intestines, was read in his absence, and a telegram sent by the Association expressing to him their pleasure and profit in listening to his paper and their sympathy and hope for his speedy recovery. There were some forty members registered by the close of the meeting on May 3d, and a resolution was passed to dispense with the annual dinner, but notwithstanding that fact, twenty of the members dined together formally at one of the hotels. Quiet receptions were held on several evenings at the houses of physicians, and upon invitation from Professor Baird the Washington fish-hatchery establishments were visited.

In the election of officers the following were selected: President, Dr. William T. Briggs, Nashville, Tenn.; Vice-Presidents, Dr. J. C. Hutchinson, Brooklyn, N. Y., Dr. E. H. Gregory, St. Louis, Mo.; Secretary, Dr. J. R. Weist, Richmond, Va.; Treasurer, Dr. John H. Brinton, Philadelphia, Penn.; Recorder, Dr. J. J. Ewing Mears, Philadelphia, Penn.; Council, Drs. Henry F. Campbell, Augusta, Ga., Hunter McGuire, Richmond, Va., P. S. Conner, Cincinnati, Ohio, and Dr. J. S. Billings, D. C.

The Association will meet in Washington again in April, 1885, and Dr. Billings was elected chairman of the Committee of Arrangements.

In regard to the Code question, it may perhaps interest you to know that while nothing was said in the meetings with regard to it further than the reading of the report of the Secretary on the first day, to the effect that several resignations had taken place in consequence of the strict adherence of the Association to the Code, and these resignations appeared to be forced, the general tenor of conversation among the members was that the Code of the American Medical Association was to be taken as a matter of course.

Miscellany.

A BILL TO PREVENT THE SPREAD OF CONTAGIOUS DISEASES AMONG CATTLE.

A BILL to prevent the spread of pleuro-pneumonia and other contagious diseases among cattle has finally passed both houses of Congress, under the stimulating supervision of a committee appointed by a convention

of cattle raisers held in Chicago last November. The bill seeks to provide an interstate quarantine system, to establish a system of inspection under the control of the Commissioner of Agriculture, and appropriates a sum to indemnify owners of diseased cattle which may be slaughtered.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 26, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	636	241	16.48	17.44	2.24	4.64	3.68
Philadelphia	927,995	353	117	13.16	6.44	—	2.80	4.48
Brooklyn	644,526	256	83	11.70	17.16	1.17	3.51	2.73
Chicago	632,100	237	122	23.52	13.02	1.55	5.46	4.62
Boston	423,800	165	50	31.01	21.66	3.05	3.05	1.22
Baltimore	408,520	156	65	19.20	7.04	4.48	4.48	—
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	72	23	13.90	6.95	2.78	1.39	1.39
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	68	29	14.70	22.05	—	8.82	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	31	9	18.38	18.38	—	—	12.92
Nashville	54,400	26	5	7.70	3.85	—	—	—
Charleston	52,286	29	6	6.90	6.90	3.45	—	—
Lowell	71,447	30	11	13.33	13.33	3.33	3.33	3.33
Worcester	69,442	21	15	14.28	—	—	9.42	—
Fall River	62,674	17	6	16.66	5.88	—	—	—
Cambridge	60,995	12	3	8.33	—	—	—	8.33
Lawrence	45,516	14	8	21.42	—	—	7.14	7.14
Lynn	44,895	7	1	—	—	—	—	—
Springfield	38,090	5	1	—	20.00	—	—	—
Somerville	31,350	8	4	—	50.00	—	—	—
Holyoke	30,515	8	4	12.50	50.00	—	12.50	—
New Bedford	30,144	16	5	18.75	12.50	—	—	—
Salem	29,503	5	1	—	20.00	—	—	—
Chelsea	24,347	4	0	25.00	—	—	25.00	—
Taunton	22,693	11	2	18.18	—	—	9.09	9.09
Gloucester	21,400	2	0	100.00	—	—	—	—
Haverhill	20,905	6	0	—	50.00	—	—	—
Newton	19,421	7	1	14.28	—	—	—	14.28
Brockton	18,323	5	0	40.00	20.00	—	—	—
Malden	15,273	6	3	—	—	—	—	—
Newburyport	13,947	4	0	—	25.00	—	—	—
Fitchburg	13,433	4	2	—	—	—	—	—
Eighty-three Massachusetts towns	343,107	72	15	6.95	6.95	—	1.39	—

Deaths reported 2273 (no reports from St. Louis, New Orleans, Buffalo, District of Columbia, Milwaukee, and Providence): under five years of age, 1632; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 331, consumption 345, lung diseases 316, diphtheria and croup 88, scarlet fever 69, diarrhœal diseases 38, measles 32, typhoid fever 32, cerebro-spinal meningitis 16, erysipelas 16, malarial fevers 14, whooping-cough 12, puerperal fever nine, small-pox four, typhus fever one. From *measles*, Chicago eleven, New York nine, Baltimore seven, Brooklyn three, Philadelphia and Cincinnati one each. From *typhoid fever*, Philadelphia fourteen, Chicago seven, Pittsburg three, New York two, Nashville, Charleston, Lowell, Worcester, New Bedford, and Andover one each. From *cerebro-spinal meningitis*, Baltimore four, New York three, Chicago and Brockton two each, Cincinnati, Fall River, Lawrence, New Bedford, and Quincy one each. From *erysipelas*, New York five, Philadelphia, three, Boston and Newton two each, Brooklyn, Chicago, Baltimore, and New Bedford one each. From *malarial fevers*, New York and Brooklyn three each, Chicago two, Baltimore, New Haven, Nashville, Fall River, Chicopee, and Spencer one each. From *whooping-cough*, New York four, Baltimore three, Cincinnati two, Philadelphia, Brooklyn, and Chicago one each. From *puerperal fever*, Brooklyn three, Chicago two, New York, Philadelphia, Boston, and New Haven one each. From *small-pox*, Philadelphia, Chicago, Cincinnati, and Pittsburg one each. From *typhus fever*, Cincinnati one.

One case of small-pox was reported in Boston, Cincinnati one; scarlet fever 65, diphtheria 20, typhoid fever four, and measles four in Boston.

In 103 cities and towns of Massachusetts, with an estimated population of 1,404,364 (estimated population of the State 1,955,104), the total death-rate for the week was 15.63 against 16.60 and 16.00 for the previous two weeks.

In the 28 great towns of England and Wales, with an estimated population of 8,762,354, for the week ending April 12th, the death-rate was 20.4. Deaths reported 3418: acute diseases of the respiratory organs (London) 283, whooping-cough 192, measles 142, scarlet fever 63, fever 49, diphtheria 28, diarrhœa 25, small-pox (London eight, Liverpool four, Newcastle three, Birmingham, Sheffield, and Sunderland two each, Derby and Hull one each) 23. The death-rates ranged from 14.9 in Leicester to 31.3 in Wolverhampton; Sheffield 16.1; London 19.1; Leeds 20.1; Birmingham 20.2; Derby 20.3; Birkenhead 21.2; Nottingham 21.9; Blackburn 22.2; Newcastle-on-Tyne 22.4; Liverpool 22.6; Sunderland 22.9; Manchester 25.6. In Edinburgh 22.4; Glasgow 28.7; Dublin 23.0.

For the week ending April 12th, in the Swiss towns, there were 56 deaths from consumption, typhoid fever 27, lung diseases 25, diarrhœal diseases 14, whooping-cough five, diphtheria and croup four, scarlet fever two, small-pox, measles, and erysipelas each one. The death-rates were, at Geneva 31.6; Zurich 23.6; Basle 19.4; Berne 33.3.

The meteorological record for the week ending April 26th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
April, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7. 23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 20	29.947	46	51	42	100	100	100	100	NW	N	N	9	12	5	R	R	R	—	—
Mon., 21	30.026	43	34	35	100	78	62	80	NE	NW	NW	2	18	21	R	O	O	—	—
Tues., 22	30.067	42	53	32	71	48	74	64	N	NW	NE	24	10	3	C	C	C	—	—
Wed., 23	29.979	48	63	34	61	46	87	65	W	W	NW	6	10	6	C	C	C	—	—
Thurs., 24	29.956	45	53	41	74	87	83	81	NE	E	NE	9	9	6	C	O	O	—	—
Fri., 25	29.719	43	51	42	95	98	100	98	NE	NE	N	11	12	8	O	R	R	—	—
Sat., 26	29.790	49	54	41	100	75	87	87	N	NE	N	8	18	6	R	O	C	—	—
Mean, the Week.	29.926	45	51	38				82										48.50	0.83

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 3, 1884.

HARVEY, H. P., passed assistant surgeon, detached from Naval Hospital, Chelsea, and ordered to St. Mary's.

MCCARTHY, R. H., passed assistant surgeon, ordered to Naval Hospital, Chelsea.

WAGGENER, J. R., passed assistant surgeon, detached from St. Mary's, and ordered to the Hartford.

WISE, J. C., surgeon, detached from the New Hampshire, and ordered as member of Board of Examiners at Annapolis.

CRAIG, T. C., assistant surgeon, promoted to passed assistant surgeon.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM APRIL 26, 1884, TO MAY 2, 1884.

SHUFELDT, ROBERT W., captain and assistant surgeon. Relieved from temporary duty in Surgeon-General's Office, and ordered to report to Lieutenant-Colonel Basil Norris, surgeon United States Army, attending surgeon Washington, D. C., for temporary duty in his office. Paragraph 6, S. O. 100, A. G. O., April 30, 1884.

BARROWS, C. C., first lieutenant and assistant surgeon. Relieved from duty at Fort Grant, A. T., and ordered to report for duty at Whipple Barracks, A. T., relieving First Lieutenant W. E. Hopkins, assistant surgeon, who, upon being relieved, will report for duty as post surgeon at Fort Grant, A. T. Paragraph 1, S. O. 31, headquarters Department of Arizona, April 21, 1884.

PHILLIPS, JOHN L., first lieutenant and assistant surgeon (Fort Warren, Mass). Ordered to report for temporary duty to the commanding officer at Fort Preble, Me. Paragraph 1, S. O. 81, headquarters Department of the East, April 28, 1884.

CUYLER, JOHN M., colonel and surgeon, retired. Died at Morristown, N. J., April 26, 1884.

Changes in Stations of Medical Officers.
(Paragraph 2, S. O. 101, A. G. O., May 1, 1884.)

HEGER, ANTHONY, major and surgeon. From Department of Texas to Department of the East.

HAPPERSETT, J. C. G., major and surgeon. From Department of Texas to Department of the East.

BENTLEY, EDWIN, major and surgeon. From Department of the East to Department of Texas.

MIDDLETON, PASSMORE, captain and assistant surgeon. From Department of Texas to Department of Missouri.

KOERPER, E. A., captain and assistant surgeon. From Department of the East to Department of Dakota.

DICKSON, J. M., captain and assistant surgeon. From Department of the East to Department of California.

GIRARD, A. C., captain and assistant surgeon. From Department of Dakota to Department of Missouri.

GIRARD, J. B., captain and assistant surgeon. From Department of Arizona to Department of the East.

HALL, J. D., captain and assistant surgeon. From Department of Dakota to Department of the Columbia.

HALL, WM. R., captain and assistant surgeon. From Department of Missouri to Department of Texas.

CUNINGHAM, T. A., captain and assistant surgeon. From Department of the East to Department of Missouri.

MCCREERY, GEO., first lieutenant and assistant surgeon. From Department of Arizona to Department of Dakota.

COCHRAN, J. J., first lieutenant and assistant surgeon. From Department of Missouri to Department of Arizona.

SUFFOLK DISTRICT MEDICAL SOCIETY. — The *Section for Clinical Medicine, Pathology, and Hygiene* will meet at 19 Boylston Place, on Wednesday, May 14th, at 7.45 o'clock. Dr. E. G. West will report a case of Myxœdema with Autopsy. Drs. F. Minot, R. T. Edes, Streeter, R. H. Fitz, F. G. Webber, J. J. Putnam, W. H. Whitney, and E. G. Cutler will take part in the discussion. Dr. W. N. Bullard will present an account of A Typhoid Epidemic. Dr. Morton Prince will open the discussion.

ALBERT N. BLODGETT, M. D., *Secretary.*

NORFOLK DISTRICT MEDICAL SOCIETY. — The annual meeting will be held at Rockland Hall, No. 2343 Washington Street, Roxbury District, Boston, on Tuesday, May 13, 1884, at two P. M. The Board of Censors will meet at one o'clock. Order of business: Report of Committees, Report of the Treasurer, Election of Officers, Incidental Business. Communications: —

A Case of Criminal Abortion with Retention of a Portion of the Secundines. E. F. Dunbar, M. D.

The Treatment of Fractures of the Femur without Splints. D. B. Van Slyck, M. D.

G. D. TOWNSHEND, M. D. *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — One Hundredth Anniversary of the Foundation of the Medical School of Harvard University. Addresses and Exercises. October 17, 1883. Cambridge. John Wilson & Son. 1884.

Studies from the Pathological Laboratory of the University of Pennsylvania. No. XV. The Bacillus Tuberculosis and the Ætiology of Tuberculosis. Is Consumption Contagious? Second Communication. By H. F Formad, B. M., M. D. (Reprint from Philadelphia Medical Times.) Philadelphia. 1884.

Congenital Lipoma. By A. Jacobi, M. D. (Reprint.) Jersey City. 1884.

Contagious and Infectious Diseases. Measures for their Prevention and Arrest. Small-Pox (Variola), Modified Small-Pox (Varioloid), Chicken Pox (Varicella), Cow Pox (Variola Vaccinæ), Vaccination, etc. Illustrated by eight Colored Plates. Circular No. 2. Prepared for the Guidance of the Quarantine Officers and Sanitary Inspectors of the Board of Health of the State of Louisiana. By Joseph Jones, M. D. Baton Rouge. 1884.

Elementary Principles of Electro-Therapeutics, with 135 Illustrations. Prepared by C. M. Haynes, M. D. Designed for the use of Students and Physicians. Published by the McIntosh Galvanic and Faradic Battery Company. Chicago, Ill.

Original Articles.

EXCISION OF A PORTION OF INTESTINE, INCLUDING PART OF THE ILEO-CÆCAL VALVE, FOR THE CURE OF FÆCAL FISTULA IN RIGHT GROIN.[1]

BY C. B. PORTER, M. D.,

Surgeon Massachusetts General Hospital.

DURING the past five years great improvements have been made in the methods of operating on the intestinal tract, and to-day it is one of the most interesting and progressive of all the departments of abdominal surgery. Up to the year 1877–1878 an occasional bold operator had ventured to perform certain operations on the intestinal tract, such as suture of wounded intestine, or even resection of portions of gangrenous intestine found in the hernial sac, but, as a rule, the surgeon was content when dealing with strangulated hernia to leave the gangrenous bowel to slough off, or, at most, to remove it, and, in either case, to hope to obtain an artificial anus that could be treated later by various plastic operations and occasionally cured. In diseases of the intestine, such as stricture, malignant or otherwise, the only recognized operation was the formation of an artificial anus at some point. This operation was generally performed in the left loin for the relief of strictures of the rectum or the sigmoid flexure. The treatment of wounds of the intestine was almost always expectant, and, unless the intestine was lying outside the abdomen with its cut edges exposed, no treatment except rest and opium was adopted. Cases of suture with or without excision are, however, to be found recorded previous to the period mentioned. In 1727 Ramdohr excised about two feet of gangrenous intestine found in an inguinal hernia. One end was invaginated in the other and secured by sutures, and the patient recovered. Up to the year 1873 there had been recorded eighteen cases of resection of a portion of the intestinal tract, followed by circular suture. The operation is indicated (1) In cases of gangrenous hernia; (2) for the cure of artificial anus; (3) for new growths or stricture of the intestine; (4) for certain cases where tumors of other abdominal organs are so closely united to the intestines that they cannot be separated; (5) for internal strangulation and invagination with gangrene; (6) For lacerations and wounds of intestines. The first two indications are most frequently met, and it is in these cases that the operation has been most often performed.

In the tables of Madelung[2] and Bouilly[3] are collected fifty-four resections for gangrenous herniæ, followed by circular suture, with twenty-eight deaths, giving a mortality of a little over fifty per cent.

Operations for the cure of artificial anus are next in frequency. Of these I find twenty-five cases with nine deaths, a mortality of thirty-six per cent. The first of these operations was performed by Dr. R. A. Kinloch, of South Carolina, in 1863, for artificial anus following gunshot wound of the intestine. The patient recovered after the formation of a fæcal fistula.

Madelung gives nine cases of resection for new growths, seven cases of prolapsed and wounded intestines from abdominal injuries, three cases of wounds during laparotomy, and three cases of internal strangulation. The greater part of these operations was performed by German surgeons, and it is to them that we are mostly indebted for our present knowledge of the subject. England and America have furnished a very small number of cases. In Bouilly's table is mentioned the successful case of Dr. W. Fuller, of New York.[4] To this we can add two cases reported by Dr. Ill, of New York,[5] one of which recovered.

Up to date there have been recorded so far as I can discover one hundred and four cases of resection of intestine, with forty-nine deaths, a mortality of forty-seven per cent. Of these one hundred and four cases there have been recorded four cases where resection followed by suture of the intestine has been performed in the United States, with three recoveries. Beside the hundred and odd cases reported above, there are others on record where the exact lesion is not stated, or where wounds of the intestine made for different objects, or caused by accident, have been united by suture. These are all interesting as bearing on this operation and its history, and show still farther the feasibility of intestinal suture. Perhaps the case to be read cannot strictly be classed with the tabulated cases as it was not a resection of the whole calibre of the bowel; so small a bridge, however, united the large and small intestine that the operation was practically the same.[6]

The method of operating has been thoroughly described in all the journals both at home and abroad, but a brief account of some of the important details in the operation is, perhaps, not out of place here. The two principal points to be observed are the prevention of the entrance of fæces into the abdominal cavity, and a very careful adjustment of the serous surfaces. The intestine should be drawn out of the abdomen and surrounded by warm, carbolized towels, and, in cases where laparotomy has been performed, some operators bring the edges of the abdominal incision together with one or two temporary sutures, leaving outside only the knuckle of intestine that is to be operated upon. Various methods have been employed to prevent the oozing of fæces from the cut intestine, some preferring digital compression above and below the wound, while others use different forms of clamps for the purpose.

Madelung and others advise excising a somewhat wedge-shaped piece of the intestine, the apex of the wedge pointing toward the mesentery. The united intestine forms therefore an obtuse angle, and the point of suture is thus wider than the rest of the intestine.

Many forms of suture have been employed, among them the most important are the invagination suture of Jobert, now seldom used, and the Lembert suture with its various modifications by Czerny and others.

It is always to be remembered that serous surfaces must be opposed. This is very perfectly done by the Lembert-Czerny stitch, which is applied as follows: A row of very fine stitches is taken near the cut edge of the intestine through the serous and muscular coats only, a very fine half curved needle being used. These stitches should be near enough together to completely

[1] Read before the Surgical Section of the Suffolk District Medical Society, March 5, 1884.

[2] Ueber Circuläre Darmnaht und Darmresection. Arch. f. klin. Chir. 1882, xxvii., p. 277.

[3] Revue de Chirurgie, May, 1883, p. 362.

[4] New York Medical Record, 1882, vol. xxii., p. 430.

[5] New York Medical Record, 1883, vol. xxiv., p. 311.

[6] It may be mentioned here that there has been one case of resection of the pylorus in the United States, that of Dr. C. M. Richter, of San Francisco. [Western Lancet, 1882, vol. xi., p. 289.] The patient died the day following the operation.

close the wound and allow no liquid contents of the bowel to pass through the interspaces. A second row of sutures is then placed outside the first, the needle passing as before only through the serous and muscular coat, including a wider portion of the intestinal wall but not reaching the first row of stitches. In this way the peritoneal surfaces are rolled in and thoroughly opposed. A slight ridge is, of course, made on the inside of the bowel, but if the incisions have been made as recommended above, the lumen is not materially narrowed.

Two forms of suture have been used, silk and catgut, and opinions differ as to which is better. Silk is not open to the objection that it may be too quickly absorbed, as is sometimes the case with fine catgut; while catgut is supposed to be less irritating, and to cause less ulceration than silk. Some operators use silk for one row, generally the inner, and catgut for the other. Whichever material is at hand can safely be used if thoroughly carbolized, and a good result can be expected for wounds of this sort when properly treated, as they heal more rapidly and with less irritation than almost any other.

When we consider the results thus far obtained in a class of cases always severe, may we not hope and expect to see the operation much more generally adopted in this country instead of being looked upon as an experimental operation performed only by reckless surgeons in foreign hospitals? The history of the operation shows it to have been most carefully worked out by a great series of experiments on animals and a cautious advance, step by step, until the operation now stands as one not only justifiable, but most advisable and proper in certain cases.

My patient, Mrs. B., aged sixty-seven, entered the Massachusetts General Hospital August 8, 1883. She had a right inguinal hernia at the age of eight years, and at some subsequent time, date unknown, had developed the same condition on the left side. Three years previous to her admission the hernia of the right side became strangulated. An operation for relief was performed, and according to her statement a portion of the intestine sloughed, and artificial anus was formed in the right groin. Twelve days previous to entrance the hernia of the left side became also strangulated. Herniotomy was performed, the intestine returned into abdominal cavity, and she entered for the care of the resulting wound on left side. In about two weeks this wound was healed, and the only remaining trouble was the almost constant discharge from the artificial anus on right side. September 12th patient was etherized, and an operation for closure of the fistula was performed by Dr. John Homans. The edges were refreshed and closed by silk sutures. Two days subsequent it was noticed that the dressings were soiled by fæcal matter. From that time to December 1st, about two months and a half, the condition varied, the opening would apparently close for a few days more or less, and then suddenly break out again with fæcal discharge. December 2d a small abscess formed two and a half inches nearer the median line, which also discharged fæces. December 10th she had a chill and high temperature, which ushered in an attack of erysipelas, from which she had recovered December 31st. Patient was extremely anxious to have another operation for cure, as she was in such a deplorable condition. Alone in the world, without friends, entirely dependent upon charity, the offensive condition in which she was would prevent her from obtaining any employment, and she would have no home but the almshouse. I talked with her a number of times, explaining fully the danger of any radical operation for cure, and she always insisted that it was her right to demand at my hands anything which afforded a chance of relief, stating that she preferred to die rather than live as she was.

According to her wishes I operated January 11, 1884, the bowels having been cleaned out by cathartic and enemata. The condition was this: two fæcal fistulæ in right groin, one about one and one half inches from spine of pubes, and the other about three inches farther outside; each about one inch above Poupart's ligament. A bougie was passed into one of the fistulous openings (the one highest up in the groin) emerging from the other opening three inches lower down. This was then cut down upon, the tissues consisting of hard cicatricial masses, and the entire cavity laid open. This cut divided the lower margin of the abdominal ring, and laid open the hernial sac; the incision was then prolonged downwards to expose the whole sac, making a wound through the skin of abdominal wall four inches long. Two openings into the intestine were found about one inch apart. These were connected by a cut made on the director dividing the superficial epigastric artery, which was first tied with a double ligature. The opening in the intestine was then seen to be in the ileum and cæcum, just at their union. The finger passed readily into the large intestine, but the attempt to introduce it into the small intestine through the ileo-cæcal valve was impossible as the cicatricial contraction involved the valve itself, and the opening was not larger than a small lead pencil. The dilator was introduced and this opening stretched, then with the forefinger of the left hand introduced into the opening a dissection was made to release the intestine from its cicatricial attachments to the abdominal wall, necessitating a section of the muscles from the external abdominal ring outwards for about four inches. This done, the intestine was free from all but its mesenteric attachments. To close up the wound in the intestine the expediency of cutting out a complete section of the intestine was considered, but was not thought wise, as it would involve removing the vermiform appendix and portions of cæcum and ileum. The cicatricial margin of the opening was trimmed off. The opening then involved about four fifths of the calibre of the bowel. The edges of this wound were then approximated, but as one side was small and the other large, intestine, the edges would not lie together smoothly. To obviate this difficulty a longitudinal cut was made in the small intestine, thus giving a longer edge of cut surface, and forming a sort of oval-shaped wound, which could be approximated accurately to the cut edge of the large intestine. The wound was then sewed up with silk sutures as follows: The needle was entered about one half inch from the wound, penetrating the peritoneal layer, then traversing the middle layer (muscular) of the gut, and emerging one eighth inch from the margin of the wound, having left the mucous layer untouched. The needle was then entered at the opposite side of the wound, in a corresponding manner traversing the middle layer, and emerging about one half inch from the wound. Ten sutures were introduced in this way. When these were drawn tight they rolled in the free margin of the wound, thus bringing two serous surfaces in contact, and turning the cut edge into the interior of the bowel.

The intestine was then allowed to fall back in the abdominal cavity after additional silk sutures had been placed between the previous ones, making twenty in all.

The ring and abdominal opening were then brought together and sewed with fine silver wire, the sutures passing through the peritonæum and fascia of the deeper muscles, but not the skin. The ends were cut short and the points bent over. Five sutures were thus placed. The skin was then united by silk sutures, a large-sized drainage tube, three inches long, being inserted into the abdominal cavity.

A graduated compress of carbolic gauze was then placed over the wound, and a full Lister dressing surrounding the abdomen and thigh, the whole being confined by a spica bandage, firmly sewed together. The whole operation was done under carbolic spray and all antiseptic precautions, occupying in all two hours and three quarters. There was but very little hæmorrhage, the vessels of the skin being tied before the abdomen was opened. There was no escape of fæcal matter at any time. The tract of the small sinus first opened was thoroughly curetted before any other cut was made.

The condition of the patient was excellent throughout, the pulse being full and moderate. About one and one half pints of ether were used.

The patient rallied well from the ether, and vomited but very little. In the evening she took hot, strong, black coffee, and brandy and soda water, but before this she had two enemata of brandy, ℥ss. each.

January 12th, the day following, patient was very much nauseated, and did not retain anything on her stomach. She then took enemata of beef tea and brandy every three hours, but after the third enema she failed to retain this. She was then ordered to have nothing at all. The night pulse was good, but after an attack of vomiting it became very weak and rapid for a few minutes. Temperature was 101° F. *Passed flatus freely.* During night she took, in all, brandy ℥ij., beef tea ℥vss., coffee ℥iiss. She had morphine, grain one eighth, subcutaneously, and during the night grain one sixth by suppository.

January 13th. She had almost constant retching, but otherwise her condition was good. She seemed rather unreasonable and complaining. She took, during the night, tea ℥ij., brandy ℥iij., coffee ℥i. morphine grain one sixth. Temperature is 100.3° F. Ordered

℞ Chloral . . . . . gr. xv.
Potass. bromid. . . . . gr. xx.

every four hours by enema. Also bicarbonate of soda and water by mouth.

January 14th. Condition excellent. Last night she took brandy ℥i., beef tea ℥ij. Enemata have been retained. During the day she has taken brandy ℥i., beef tea ℥iiiss., coffee ℥iij., tea ℥iii. No opiate. Temperature is normal. Pulse 95, full and strong. Has no tympanites or tenderness of abdomen. Has no pain, except an occasional sharp, darting pain in lower part of abdomen. She seems herself again mentally. To-day has had two dejections, the last being involuntary.

January 15th. Temperature up a little (100° F.). No leakage from dressing, but some slight odor. Lister changed under spray. Very little union of edges of wound. Drainage tube removed, and a smaller and shorter one inserted, not penetrating so deeply as to enter peritoneal cavity. Iodoform placed on wound, and full Lister dressing replaced. (She has taken to-day brandy ℥iss., beef tea ℥viii., milk ℥ivss. Enema of bromide and chloral given only once to-day, as patient was perfectly quiet and comfortable.)

January 16th. (Very comfortable. Has taken a large amount of nourishment to-day, namely, beef tea ℥xxi., coffee ℥xxiij., milk ℥v., brandy ℥v. Temperature below 100° F.)

January 17th. Says she feels as well as she ever did, except for weakness. (Has taken to-day brandy ℥i., beef tea ℥xxi., milk ℥xiij., coffee ℥x., tea ℥v. The brandy, although given in ℥ij. doses only, causes some flushing; reduced to ℥i. doses.)

January 18th. Slight staining of dressing; changed under spray. The wound of skin has gaped for its whole length, the edges being composed of hard cicatricial tissue, and the bottom of the wound being an old sinus. Short, small drainage tube inserted at middle of wound, and another small one at lower end in place of the original tube. She has taken to-day some stewed oysters and small sandwiches of raw scraped beef.

January 20th. Lister changed. Tube at lower end of incision shortened a little. There is some pocketing of pus at middle of wound.

January 22d. Lister. Small pocket above mentioned dilated.

January 24th. Temperature normal. Feels well. Normal dejection yesterday.

January 25th. Has been doing perfectly well until this noon, when she had a chill and rise of temperature. The dressing was changed, and the wound seen to be looking very well. The skin was a little tense, and there was a general marked induration all about. A phenyle poultice, consisting of cotton batting wrung out in hot phenyle and covered with oiled silk, was applied, and iodoform was sprinkled into the wound. Felt very restless and was querulous, quite different from her ordinary self.

January 26th. The phenyle poultice was changed every fifteen minutes until midnight, a dry gauze dressing being then applied. This morning upon removing the dressing pus was seen to escape by two openings in the wound; the tenseness and induration had disappeared to a great extent. On coughing about ℥ss. of fetid pus appeared at upper end of wound. Fomentations replaced and renewed every half hour until night.

January 29th. Had rise of temperature last night, probably due to extra exertion caused by sitting up in bed, or perhaps to bowels. Patient was given an enema with good results. Last night appeared weak in her mind, talking in a childish manner, but responding to questions rationally.

January 30th. Mental condition all right. Wound looking perfectly. Tube shortened to a small piece at lower end of sinus. Has had three loose dejections to-day.

February 2d. Temperature to-night 102.5° F., due, possibly, to the fact that she was somewhat excited by the visit of the students. Has had two dejections.

February 5th. Has been out of bed, allowed to stand on her feet, and take a step or two.

February 6th. Drainage tube omitted, and the wound, which is merely superficial, packed with charpie and myrrh. Almost no dischage from the wound. Patient is gradually gaining in strength, and her mental condition much less childish than a few days ago.

From this time on the patient has gradually im-

proved, the wound has entirely healed, and temperature and dejections have been normal. There has also been a constant increase in strength.

SPINAL IRRITATION AND NEURASTHENIA.[1]

BY G. LIEBMANN, M. D.

IT appears that the word "neurasthenia" is at present in everybody's mouth; that it is, in fact, like a big pot into which various nervous and mental disorders of depression are thrown pell mell, and without much discrimination.

Although Beard and Rockwell, in their work on medical and surgical electricity (1875), say that spinal irritation almost always forms a part of hysteria and neurasthenia, constituting, as it were, a subdivision or accompaniment of them, they still hold, it may be with a certain degree of reluctancy, that spinal irritation is a disease per se "when the spinal tenderness and the symptoms that directly flow from it overshadow other accompanying conditions." We see, therefore, that these authors only conditionally identify neurasthenia (nervous exhaustion) with spinal irritation, and I, for my part, cannot comprehend how Rosenthal, and, if I am not mistaken, Erb, come to the assertion that these, our American authors, proposed the term of neurasthenia for the so-called depressed form of spinal irritation. The fact is, Beard and Rockwell are the first who described the symptoms of nervous prostration, pure and simple, under the name of neurasthenia, but vindicated to spinal irritation its character of a separate and independent disorder. They relate cases in which the least physical or mental exertion was followed by extreme exhaustion *without spinal tenderness*, even one case of neurasthenia in a plethoric patient in whom not a trace of an organic lesion of the cord could be detected.

Each practitioner ought to do his own thinking, and although looking up to the great lights of our science with admiration, still have his eyes open, and see how far his own experience tallies with the teachings of authorities. If we do this with regard to the disease in question (neurasthenia) we plain practitioners find that uncomplicated neurasthenia is a very rare disease. In a practice of twenty-seven years I scarcely can recall more than five cases of idiopathic neurasthenia which came under my treatment if I exclude those cases of nervous prostration which depended upon anæmia, losses of blood, and protracted lactation. I say cases of *idiopathic neurasthenia*, for many cases of apparent nervous exhaustion are no distinct and separate disease *per se*, but reflexes caused by underlying organic diseases of the sexual organs. Notwithstanding the assertion of Rosenthal that the depressed form of spinal irritation is identical with neurasthenia, numerous cases in my practice teach me otherwise, and that the irritation in question is not a spinal neurosis, but a symptom of chronic prostatitis in the male or chronic ovaritis or metritis in the female. Apart from my own observations of cases of so-called spinal irritation (with depression) or neurasthenia in young men, Rosenthal, in enumerating the symptoms of spinal irritation, also lays great stress on the prostatic symptoms. The following are his words: "Other important disorders also appear on the part of the genital functions. In general the patients are easily excitable, but the erections and virile power are deficient; ejaculation of semen is often premature, and followed by distressing sensations in the back and legs. When the mind is occupied with erotic thoughts, and even after defecation or micturition, some drops of prostatic fluid (almost always without admixture with spermatozoids) frequently appear in the meatus. True spermatorrhœa only occurs at great intervals. Chronic pollutions, on the other hand, are frequent, and when they follow one another in rapid succession they greatly aggravate the manifestations of the disease. In the majority of patients the urethral canal presents, especially in the prostatic portion, an acute sensitiveness even when a sound of small calibre can be introduced without difficulty." Who reading this graphic description does not think at once of the so frequent chronic prostatitis with all its tortures to the patient and the attending physician as well? As all the chronic disorders of the pelvic organs through the sympathetic nervous system produce the most serious bodily and mental disturbances, and especially a hypochondriacal state of the mind, the disorders of the prostate gland and ovaries do so *par excellence*. But although these disorders, by means of disturbances of the vaso-motor nerves within the spinal column, may bring on *temporary* hyperæmia or anæmia, we have no right to isolate these symptoms from the existing original pelvic disorder, and to classify them under the head of "spinal irritation with depression," for I always find that in the course of these pelvic lesions the spinal symptoms are but evanescent, and coincident with the functioning or excitation of the respective diseased organ. Furthermore the nervous weakness is but apparent, as best shown by the results of treatment. Although these patients complain of bodily and mental fatigue (see also report of cases of urethral stricture by Drs. G. H. Tilden and F. S. Watson), a tonic treatment, often and faithfully employed by me, never accomplished anything. Again, the much-extolled *rest*, doing so much good in real neurasthenia and in true spinal irritation, gives bad results in the symptomatic form.

I come, therefore, to the conclusion that neurasthenia and spinal irritation are two *different* and *distinct* things, and that cases of the so-called depressed form of spinal irritation of Rosenthal neither belong to the one nor the other, *and are but symptoms of another existing disease of the pelvic organs*. For whilst in real spinal irritation by means of a false innervation and consecutive vaso-motor disturbances these pelvic organs may be affected secondarily, or, on the other hand, might have ceased to be diseased some time before the advent of the spinal symptoms, in pseudo-irritation the pelvic lesions always precede the symptoms of irritation, and these in return disappear with the disappearance, or at least abatement, of the organic pelvic disturbances.

When young men with all the symptoms of a chronic prostatitis, and complaining of some lumbar pain and hebetude, and exhibiting more or less vetebral tenderness, call on their physician, or young married ladies with some slight trouble of the pelvic organs apply to our skill and sympathy, and are frightened out of their wits by being told why they suffer from spinal irritation, I unhesitatingly say *this is downright cruelty*, for the impression thus made on the patient is demoraliz-

[1] Read at a meeting of the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, March 12, 1884.

ing and discouraging in the extreme, and besides we say what is not true. I therefore propose the following classification of the disorders: —

(1.) Neurasthenia.
(2.) Spinal irritation.
(3.) Pelvic rachialgia.

I. NEURASTHENIA.

This is, as the term itself implies, a nervous weakness, uncomplicated with organic disease, a diminution of nerve force, depending upon a hitherto unknown disturbed condition of the nerve centres. As we do not know, so far, the material basis of this condition, we have to consider the malady as a functional exhaustion of the motor and intellectual sphere. The least bodily or mental exertion causes fatigue and rapid exhaustion, and any mental labor brings on nervous excitement and inability to go on in the work. As a rule, there is no tenderness of the vertebræ, and but exceptionally the disease is complicated with spinal irritation. Rachialgia is no conspicuous symptom, and of the sensory nerves only those of the head are involved. Nutrition is impaired, and loss of flesh is considerable. The psychical faculties are affected. Although intelligence may be preserved there is weakening of the memory and confusion of ideas, and the result is a considerable diminution of the capacity for mental labor. There is disturbance of sleep, even insomnia. But the most apparent symptom is the lack of muscular endurance.

From an ætiological point of view a hereditary disposition to neuroses is first of all to be mentioned. Among the exciting causes which produce nervous exhaustion, grief, mental distress, overwork, excesses in venery, and seminal losses play the most conspicuous rôle. *Overlactation* is sometimes a cause of neurasthenia, but it is not always easy to determine whether under such a contingency we have to deal with anæmia or neurasthenia. I have seen a young married lady with most alarming symptoms of nervous prostration, which came on during lactation, and yielded readily to weaning the child and a ferruginous treatment. In her case the differential diagnosis was established by a microscopical examination of the blood, which excluded anæmia.

The *treatment* of neurasthenia must consist of rest, abstinence from emotional excitement, and from mental and physical work. Besides a sojourn in the country, along with avoiding fatigue or long walks, the application of general faradization offers the quickest and surest chances of recovery. It is in neurasthenia that I have had the best results from the method of applying the interrupted current, first practiced and described by Beard and Rockwell, and designated by them as general faradization.

II. SPINAL IRRITATION.

If in *neurasthenia* we noticed that the most predominant symptoms were those of *depression*, we see in spinal irritation those of *irritation*. The most prominent symptom is dorsal pain, which appears especially after exertion and fatigue, but is hardly ever wanting (Rosenthal). Generally, several vertebræ are tender, which tenderness, however, is stable, and not varying, as in the symptomatic form. This painful region is acutely sensible to slight mechanical irritations, such as the application of electricity or heated water. The rachialgia is increased through any exertion, especially flexion of the trunk (Rosenthal), and the patients are apt to mistake this pain for pain in the kidneys. There are, besides, unlike neurasthenia, neuralgias in different parts of the body, cervico-occipital, intercostal, facial, lumbar, abdominal and crural; there are cephalalgia and nausea, besides numbness in the lower limbs, and sensations of burning and sometimes of cold. Again, there are serious motor disturbances, as muscular contractions, which are very distressing, and occurred in two of my cases especially in the muscles of the neck and calf. In true spinal irritation, as in neurasthenia, *but unlike* symptomatic spinal irritation, or rather pelvic rachialgia, we meet generally with emaciation of our patients; the features are pinched, there is an expression of suffering and of anxiety. If we say that neurasthenia is amenable to treatment, we have to state that spinal irritation gives a far worse prognosis. That there is an organic lesion of the spinal column in spinal irritation, either hyperæmia or anæmia, seems to be accepted by most authorities except Leyden. Again, if we may depend upon the assertions of some that spinal irritation runs into tabes occasionally we must certainly believe it to be an inflammatory process, a surmise that is strengthened by the fact that local antiphlogistics, as cupping, leeching, counter-irritants, often bring about relief.

Treatment. A hot douche to the spine daily employed along with the administration of tincture of aconite root (two drops every three hours), or five drops of gelsemium every four hours (Bartholow, spinal hyperæmia) are the most efficient means. The latter author remarks: "In all cases of spinal hyperæmia the cause must be removed." But can we do this always? I hold that spinal irritation is mostly hereditary, and of course we cannot remove heredity. The most powerful remedy at our hands to improve the faulty circulatory conditions of the spinal column is, after all, galvanism, and a descending stabile galvanic current has produced more good in my hands than any internal remedy.

III. PELVIC RACHIALGIA.

This term, I am aware, does not fully cover the whole field of symptoms which I am about to group together as a disorder, — distinct from, although resembling, spinal irritation, — and the term *symptomatic* or *pseudo*-spinal irritation might for this reason be more appropriate. But as *rachialgia* is by far the most prominent symptom, and originates from and follows the underlying pelvic disturbances, and the word spinal irritation, even when qualified by the reassuring prefix *pseudo* or *symptomatic*, is so vague, misleading, and shocking to the sensibilities of physician and patient alike, I adopted this term as it stands. Pelvic rachialgia, then, is a complex of symptoms generally designated by the authors as spinal irritation with depression. But these symptoms constitute, as we have seen, no distinct, separate disease of the spine, but are the expression of an organic lesion of the pelvic organs. I omit to relate cases illustrative of this point, and offer to your kind consideration but my honest conviction, gained from observation of a great many cases, in which it was evident that the so-called symptoms of spinal irritation never appeared *before* the affection of the prostate, the ovaries, the uterus, or the urethra, and that they were constantly accompanying the pelvic disorders, although it must be admitted that a hereditary disposition to neuroses in general favored the appear-

ance of the spinal sympathy. If, on the other hand, a cessation of the spinal irritation coincides with the cessation of the pelvic disorders, we must certainly come to the conclusion that the sympathetic symptoms of the spinal cord, as rachialgia, burning sensations in the lumbar region, general languor, are typical and characteristic symptoms of pelvic organic disease just as much as a mucous discharge after defecation or micturition is of prostatitis or leucorrhœa of cervicitis. If in studying real spinal irritation we have noticed that, as in neurasthenia, loss of flesh, even emaciation, is likely to be present, that the expression of the face denotes a considerable degree of suffering, a suffering stabile and constant; again, that the appetite is poor and sleep disturbed, we find in pelvic rachialgia that the *appetite is good*, and that the patients have a healthy and plump appearance, a circumstance that induces the friends, and often even the attending physician, to think that the symptoms complained of are either imaginary, exaggerated, or simulated. There is besides, as already stated, a considerable difference in the *result* of *treatment* between spinal irritation and pelvic rachialgia. In the former violent bodily exercise increases the trouble, and rest and tonics give good results. In the latter rest is injurious, tonics give a negative result, but saline aperients and bodily exercise give, as a rule, astonishing success.

I have at present a patient suffering from incurable chronic prostatitis, whose distress and despondency for the last ten years has been pitiable indeed, as his rachialgic symptoms, as lumbar pain and burning, languor, irritability, and nervousness, had not been mitigated either by tonic, hydropathic, or electrical treatment, who instinctively takes some kind of physical exercise and experiences instantaneous relief from his nervous irritation. Under the head of these exercises I name ten-pin rolling, billiard playing, horseback riding, and walking. That the transitory good result of these physical exertions must depend upon disengorgement of the prostatic gland, brought about by removing venous stasis or congestion, I do not doubt for a moment. An important difference between real spinal irritation and the feigned form (pelvic rachialgia) is, that the symptoms of the latter are *evanescent*. Thus you are apt to see such patients in the most changeful state and disposition of body and mind, now exultant and joyful, elastic in their actions, free from pain, with a complexion ruddy, with eyes beaming and reflecting happiness and high spirits, only to relapse after the act of micturition or defecation into a fit of exhaustion, suffering, despondency, or distress. As also in pelvic rachialgia the spinous processes, especially of the lumbar vertebræ, show a decided tenderness, but, as I very often observe, during the interval of comparative well feeling this tenderness is entirely wanting. It is interesting to study how with the reappearance of the pelvic irritation this tenderness recurs at once, and along with it the entire train of symtoms of irritable weakness.

Cephalalgia or other neuralgias and *insomnia* I rarely meet with in pelvic rachialgia. On the contrary, patients sleep generally long, are inclined to be indolent, and excuse their laziness by stating that they feel better whilst in bed. But this comfortable feeling in bed is but apparent, for during rest in bed there is no desire to micturate or defecate, the pelvic organs are at rest, and there is hardly any congestion. Hence a pause in the rachialgic symptoms.

But as soon as the patient after rising goes to stool, the prostate, riding as it were on the rectum, is getting pushed or pulled along by the movement, and this irritation is at once transmitted to the lower parts of the spine, to be followed by nervous prostration, burning, tenderness of the vertebræ, and so on. How these symptoms are produced, whether by disturbances of circulation within the spinal column, due to temporary paresis or stimulation of the vaso-motor nerves, or by reflex action, I am not prepared to state.

The prognosis as to an ultimate radical cure in pelvic rachialgia is not favorable, as only with a cessation of the pelvic disorders a perfect cure can be expected, and these very diseases are rarely eradicated. But an amelioration of the distressing symptoms to the extent even of a rather comfortable existence can with safety be promised the patient.

As the most successful *treatment* of pelvic rachialgia I consider the administration of drachm doses of sulphate of magnesia before breakfast three to four times a week, cold ablutions of the lumbar and hypogastric regions, and moderate bodily exercise, as gymnastics, horseback riding, billiard playing, and so on. Furthermore, I find celibacy on the one hand and excesses in venery on the other injurious, but a very moderate and judicious performance of the sexual functions beneficial.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

A CONTRIBUTION ON THE FORMATION OF GIANT CELLS IN EPITHELIAL TISSUES.[1]

MUCH has been done of late in the investigation of giant cells, and differences of meaning have arisen as to their manner of formation, their origin, their value, and the soil from which they spring.

In regard to their formation, it is supposed that they came either from a single cell alone or by the addition of protoplasm from the neighborhood, or from the union of many cells.

Their origin has been assumed to be from white blood corpuscles, from granulation tissue, from endothelium, and from epithelium.

A different value has been assigned to them. In part they are considered as a product of progressive, in part as an expression of retrograde, metamorphosis. To the first group are reckoned the cells of this class occurring normally in the bone marrow as well as those arising in granulation tissue and in sarcomas, while those in lupus and tubercle appear to many authors to belong to the second group.

They come in very different tissues. Normally they are found in the bone marrow, in the reabsorption of bone, in the placenta, and in the uterine sinuses at the insertion of the placenta. In pathological processes they occur repeatedly. Here the nuclei are colored less distinctly, and are only to be recognized by their faint contour; this finally disappears, and with it the nucleus, and there only remains a glancing scale.

In epithelial growths the protoplasm in which these nuclei lie corresponds with that of the epithelial tongues, and is either granular or homogeneous. It has no peculiarities in respect to coloring agents, except at times it does not color at all, suggesting a fatty degen-

[1] Klauss, Virchow's Archiv, vol. xcv., p. 249.

eration. The shape of the cells varies greatly. Among the smallest there is a form corresponding to flat epithelium, while the larger ones have no type. The first can often be seen in the periphery of the tongues, and occasionally they are found occupying an entire cross section. For these cells there is no doubt of their origin from epithelium. On the other hand, when these cells lie in the periphery they are either directly connected with it or separated from it by a narrow space. In the latter case they appear as polyformed protoplasmic masses corresponding in size to several epithelial cells, to which they probably correspond. Finally, giant cells are found in the round cell tissue, but their nuclei and protoplasm correspond with those previously described.

Whether these cells are formed by confluence of other cells, or whether from nuclear division or from a combination of both processes, is to be considered. In support of the confluence theory there is to be brought forward their irregular form, the atypical position of the nuclei, the degenerative processes which they undergo (calcification, or change into hyaline scales), and finally the fact that a faint contour is still visible in many of the larger cells. In other cases where round or oval protoplasmic masses can be made out, in the midst of which are fine vesicular nuclei, the division of the nuclei must be assumed.

The essential results of these observations, which were made on over seventy cases of epithelial new growths, were: —

(1.) In epithelioma there occur giant cells which are derived from the epithelial cells.

(2.) No certain conclusion can be drawn as to the manner of their formation.

An interesting fact was the production of giant cells along a piece of catgut which had been used at a primary operation and was removed with the recurrent growth.

In an adenoma of the sebaceous glands, a very rare form of growth, and essentially an epithelial structure, giant cells were also present.

INVESTIGATIONS ON THE CICATRIZATION OF THE INTIMA AND MEDIA OF ARTERIES AFTER LIGATURE.

Zahn [1] has made a series of observations upon the healing of the media and intima of vessels after rupture. He was led to this by a case of aneurism, in which this had evidently taken place, and where it seemed that the material for restoration was formed from the endothelium without the aid of the elastic or connective tissue.

The experiments to prove this consisted in the partial ligature of the carotid or femoral of rabbits. A silk thread was passed round the vessels and tied; after a time, varying from thirty seconds to one minute, the the knot was loosened and the blood allowed to resume its course. Sometimes one and sometimes two ligatures were placed about the vessel. In the latter case the peripheral was always loosened first in order to prevent the sudden pressure from causing an extravasation of blood between the coats.

In a few cases the external surface was covered with cinnobar. The wound made by the operation quickly healed by first intention.

The animals were killed after varying times either by puncture of the medulla or by bleeding. The skin was quickly removed, and the artery carefully loosened from the surrounding tissue for a considerable distance. A piece of pith was placed beneath the vessel, which was pinned to it. The whole was then removed, and the artery laid open with a fine pair of scissors. The internal surface was washed with a small stream of distilled water, then covered for a few minutes with a one half per cent. solution of nitrate of silver. The specimen was hardened in alcohol and imbedded in celluloid.

The specimens from the third or fourth day after ligature were prepared by first washing with a three fourths per cent. solution of common salt, then for fifteen to thirty minutes in a five per cent. solution of nitric acid. After this a weak solution of alum was poured over them and then immersed for twenty-four hours in a solution of alum carmine. Afterwards hardening in alcohol.

As the result of the examination of these preparations it appeared there was no formation of a thrombus after tearing the intima through entirely and partially rupturing the media. During the first or second day rather more red and white corpuscles were found on the irregular edges of the rent than elsewhere on the surface of the vessel, but never in sufficient numbers to form a real clot. Further, the rest of the media and the externa were sufficiently strong to withstand the arterial pressure and thus prevent an aneurismal dilatation.

The most important rôle in the process of repair is played by the intima. In the neighborhood of the edges there is a marked formation of new cells. In places these lie one over the other and push towards the opening, first covering the sides and then the bottom of the tear. By their further increase they fill up the hole entirely, and then appears between them a homogeneous substance replaced later by a fibrillar connective tissue. Thus the cicatrization proper is brought about by the endothelium alone, the other tissue elements taking no part in it.

In consequence of the force applied to the outside of the vessel there is a reactive hyperæmia of the adventitia, with an infiltration of round cells, which later assume a spindle shape. They never, however, penetrate deeper than the external coat, and cannot therefore have anything to do with the repair of the inner coats.

(To be concluded.)

[1] Virchow's Archiv, vol xcvi., p. 1.

Reports of Societies.

THIRTY-FIFTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

First Day's Proceedings.

The thirty-fifth annual meeting of the American Medical Association opened in Washington, Tuesday morning, May 6th, at eleven o'clock, at the First Congregational Church, about one thousand delegates being present.

The first session was called to order by Dr. A. Y. P. Garnett, Chairman of the Committee of Arrangements. Prayer was offered by Rev. John H. Elliott, and the address of welcome was then delivered by Dr. Garnett, who dwelt upon the appropriateness of Washington as a centre for such gatherings of a national character, and predicted its increasing importance and attractiveness as a city.

ANNUAL ADDRESS BY THE PRESIDENT.

DR. AUSTIN FLINT, President of the Association, was received with much enthusiasm upon rising to deliver the annual address. The first part of his address was a review of the history of the Association, and his subsequent remarks were especially devoted to a consideration of what had been done in the past to elevate the standard of medical education and of professional dignity, and of what remained to be done in the early future.

He expressed his conviction of the necessity of endowments for the establishment and maintenance of high standards in medical schools. During the preliminary education previous to the study of medicine every student ought to gain a thorough knowledge of the more liberal arts and sciences. The study of the dead languages is not so essential to a medical education as the study of physics, of biology, and of the French and German languages.

There are some colleges, Dr. Flint acknowledged, which may be guilty of flagrant abuses, which do injustice to students seeking a higher standard of medical knowledge, by allowing other students to gain a knowledge of the profession cheaply and too hastily. In an experience, however, of forty years among medical students, he was prepared to say that they compare favorably with students of the other sister professions.

In the standard of medical education he had no disposition to apologize for some abuses and evils complained of by brother professors. A large number of medical colleges place their reliance upon State legislation, which is delusive. Some private colleges are deficient in their means of instruction, and lack the requirements for giving a proper and thorough medical education. Our duty is to promote more and more and elevate our profession, and to do this the profession must rely upon itself, recommending changes and improvements in certain measures of immediate practicability. In this the National Association must take the initial step, at the same time coöperating with the medical colleges, with an earnest desire for harmonious views and united action, to secure uniformity in the different States, and opposing all differences. To this end he suggested that a standing committee be appointed upon the uniform action of medical colleges. It is not to be expected that all of these desirable improvements can be accomplished at once, but with earnest efforts the result of a higher standard of medical education can be achieved through a board of examiners not engaged in medical education.

Dr. Flint then referred to the usefulness of the medical profession, the manifold difficulties and peculiarities of the calling. In order to practice the profession a physician must both honor himself and the profession. The same Code of Medical Ethics which was adopted in 1847 at the convention held in Philadelphia is still held intact by the medical societies throughout the United States except in New York. The excellence of the Code has produced a salutary influence upon the lives of the profession, and far more so than the medical ethics of any other country. The opposition to this Code involves both a question of taste and of principle. It forbids consultation with irregular practitioners, and presumes that every practitioner must possess the professional ability and requirements of a physician, who has received a regular education, and who does nothing that is prejudicial to the honor and usefulness of the profession.

Continuing, Dr. Flint alluded to the humane principles of the profession and its higher laws of philanthropy. He referred to the advancement in the diffusion of medical knowledge through the medical journals, and the work done by the several Sections.

Referring to the International Medical Congress of 1887, Dr. Flint thought it should be held in this country rather than at Copenhagen. He feelingly alluded to the serious illness of Prof. Samuel D. Gross, of Philadelphia.

In conclusion, Dr. Flint spoke of the great advantages to be derived from the American Medical Association meeting in Washington, where the Army Medical Museum and a medical library, the largest, most valuable, and most practical in the world, were at hand. He hoped that Congress would provide for the erection of a new library building in which this valuable medical collection could be safely stored. Here also was the National Museum and the Department of Agriculture, all of which were of interest to the delegates.

Dr. Flint was frequently applauded during his address, at the conclusion of which

DR. JOSEPH M. TONER, of Washington, moved that a telegram be sent to Prof. S. D. Gross, of Philadelphia, informing him of the sympathy felt for him by the Association in his illness and of its hopes for his speedy recovery. This was unanimously adopted.

DR. SAYRE, of New York, moved that that part of President Flint's address relative to the International Medical Congress of 1887 be referred to a special committee of five with Dr. Billings as chairman, and the motion was adopted.

A motion by DR. QUIMBY, of New Jersey, that 5000 copies of the President's address be printed, was also adopted. That portion of the address concerning the subject of Medical Ethics was upon motion of Drs. Garcelon of Maine, and Ferguson, of New York, referred to a committee of seven, to report upon its recommendations as soon as possible.

ANNOUNCEMENTS.

Announcements were made of certain papers submitted to be read before the Association upon State County Hospitals by Dr. Suttens, of Aurora, Ind.; one by Dr. Theobold; another by Dr. John T. Roberts, upon the Use of the Trepan in Head Injuries; another by Dr. Walter Wyman, U. S. A., in charge of the Marine Hospital Service in Baltimore, upon Hospitals, etc.

The announcement was made that the various delegations would meet in different portions of the auditorium and galleries of the church after adjournment for the purpose of nominating one member from each delegation to form a nominating committee upon officers to be elected for the ensuing year.

The Association adjourned at 1.30 P. M., to reassemble at ten o'clock the next morning.

MEETING OF SECTIONS.

After the adjournment and at 2.30 o'clock the different Sections met. Those of the Practice of Medicine, Physiology, Obstetrics and the Diseases of Women, on Ophthalmology, Otology, and Laryngology, and on Diseases of Children, meeting in different portions of the church; the Section on Surgery at the armory of the National Rifles; and the Sections on Oral and Dental Surgery and State Medicine at Medical Society Hall, southeast corner of Sixth and F Streets.

The first Section, on the Practice of Medicine, Dr. John V. Shoemaker, chairman, listened to papers by Drs. Austin Flint, Sr., Edward Janeway, New York, Louis A. Duhring, of Pennsylvania; Whittaker, of Cincinnati; Black, of Illiuois; and Traill Green, of Pennsylvania. In this Section several papers were passed over for want of time.

The second Section, on Obstetrics, Dr. T. A. Reamy, of Cincinnati, President, carried out its full programme, papers being read by Drs. Sutton, of Pennsylvania; Campbell, of Georgia; Polk, of New York; Byford, of Illinois; Joseph Taber Johnson, of the District of Columbia; and Jenks, of Illinois.

The third or Surgical Section, Dr. C. T. Parks, of Chicago, chairman, heard one paper by Dr. Fred. S. Dennis, of New York, and on the announcement of the death of Professor Gross, of Philadelphia, adjourned until the next day.

The fourth Section, on Public Health, Dr. Deering J. Roberts, of Tennessee, chairman, and Dr. Franzoni, District of Columbia, secretary, listened to papers by Dr. Leffmann, of Pennsylvania, and C. H. Von Klein, of Ohio.

The fifth Section, Dr. J. J. Chisolm, of Baltimore, chairman, heard papers by Drs. Keyser, of Pennsylvania; Risley, of Pennsylvania; Williams, of Ohio; and Seiler, of Pennsylvania.

Papers by Drs. Woodbury (Pennsylvania), Duncan (Missouri), and Brown (New York) were read before the sixth Section (Diseases of Children), of which Dr. William Lee, of Baltimore, is chairman, and Dr. G. N. Acker, of Washington, secretary.

The Section on Oral and Dental Surgery, Dr. T. W. Brophy, of Chicago, chairman, and Dr. John S. Marshall, of Chicago, secretary, heard a paper by Dr. Jacob H. Williams, of Boston, and adjourned.

RECEPTION AT THE WHITE HOUSE.

In the evening the Association was received by the President of the country at the White House. The arrangements were as elaborate as for any official reception of the winter. The suite of state apartments on the ground floor was open and decorated, and, in addition, almost all of the rooms of the second floor were thrown open to the guests. The Marine band was stationed in the vestibule, and at half-past eight struck the first chords of "Hail to the Chief" as the receiving party descended the stairway and entered the blue parlor. In addition to the thousand members of the Association in the city, many of them accompanied by their wives, many government officials and others were present by invitation of the President. Secretaries Frelinghuysen, Lincoln, and Chandler, Postmaster-General Gresham, Attorney-General Brewster, and Secretary Teller were in the blue parlor back of the receiving party.

Upon leaving the White House the members, accompanied by their families, repaired to the residence of Mrs. L. Z. Leiter, corner of P Street and Connecticut Avenue, where a very handsome reception was given them. This reception lasted until after midnight.

SECOND DAY'S PROCEEDINGS.

The American Medical Association reassembled Wednesday, June 7th, at the previous place of meeting at ten o'clock A. M., and prayer was offered by Rev. W. A. Bartlett, D. D.

DEATH OF PROFESSOR GROSS.

The President announced in a few suitable words the death of Prof. S. D. Gross, which took place in Philadelphia the previous afternoon. Dr. Gross was formerly President of the Association, and his name evoked some eulogistic remarks.

A committee, consisting of Drs. Austin Flint and L. A. Sayre, New York; Drs. Packard, Pennsylvania; F. H. Hamilton, New York; Moses Gunn, Chicago; W. T. Briggs, Tennessee; and I. M. Hayes, Pennsylvania, was appointed to draft resolutions of respect to the memory of the deceased.

APPOINTMENT OF COMMITTEES.

The committee of seven to which was referred the President's address was named, as follows: Drs. N. S. Davis, W. W. Dawson, W. T. Briggs, D. W. Stormont, T. F. Prewitt, J. L. Cabell, and H. B. Ransom.

It having been suggested that the next International Medical Congress — that of 1887 — ought to be held in the United States, the following gentlemen were appointed a Committee on Invitation: Drs. J. S. Billings, Washington; L. A. Sayre, New York; R. H. Fitz, Boston; I. Minis Hays, Philadelphia; Henry F. Campbell, Georgia.

The following Committee on Nominations was appointed: Jerome Cochrane, Alabama; P. O. Hooper, Arkansas; J. W. H. Lovejoy, District of Columbia; H. Galloway, Dakota; Jesse Harris, Colorado; G. L. Porter, Connecticut; W. Marshall, Delaware; F. W. Hatch, Jr., California; E. P. Cook, Illinois; T. B. Harvey, Indiana; H. C. Huntsman, Iowa; F. T. Dickman, Kansas; W. H. Wathen, Kentucky; T. G. Richardson, Louisiana; F. C. Thayer, Maine; J. S. Lynch, Maryland; B. A. Duncan, Mississippi; D. Leasure, Minnesota; Charles A. Savory, Massachusetts; N. F. Essigs, Missouri; C. J. O. Hagner, North Carolina; J. W. Parsons, New Hampshire; H. F. Lester, Michigan; S. F. Merser, Nebraska; J. W. S. Gouley, New York; J. Parish, New Jersey; W. M. Beach, Ohio; J. B. Murdock, Pennsylvania; J. H. Eldridge, Rhode Island; W. Huger, South Carolina; J. H. Pope, Texas; Duncan Err, Tennessee; Alexander Harris, Virginia; H. D. Holton, Vermont; George Beard, West Virginia; William Fox, Wisconsin; J. R. Smith, United States Army; N. L. Bates, United States Navy; Walter Wyman, United States Marine Hospital Service.

MEDICAL AND SANITARY SERVICE ON PASSENGER VESSELS.

DR. A. N. BELL, chairman of the committee appointed upon the resolution for securing more competent medical and sanitary service on board trans-oceanic passenger vessels, submitted a report. He stated that after due consideration a bill was prepared and placed in the hands of Hon. H. W. Slocum, who had introduced it in the House, and it had been referred to the Committee on Commerce. The bill To Regulate the Carriage of Passengers by Sea provides that in all such vessels two compartments shall be provided exclusively to be devoted to hospital uses, one for men, and one for women. It requires the employment of a medical practitioner, and when the number of passen-

gers exceed six hundred he is to have an assistant. The doctor is to report to the captain such regulations as he wishes carried out.

The report of Dr. Bell elicited a discussion which was participated in by Dr. Kaiser, of Philadelphia, Dr. Irwin, of New York, and Dr. Jones, of Pennsylvania. Dr. Kaiser thought that the bill was a good one, but it did not go far enough, as it should require the surgeon of the vessel to report directly to the United States government, and not to the captain of the vessel. Dr. Irwin said that owing to the fact that the bill allowed the surgeons to be appointed by the company, and to be under their control, it was impracticable. He favored the plan of making the surgeon independent of the company, and in all sanitary matters subject only to the laws of the United States. Dr. Jones said that from his position as a government medical inspector he had never found that captains of our vessels interfered with sanitary regulations, or that the hospitals of those vessels were occupied with rope and waste matter. The report of the committee was accepted, and the committee continued.

A resolution urging upon Congress immediate action in the matter was adopted.

THE BACILLUS TUBERCULOSIS AND THE GERM THEORY.

DR. J. V. SHOEMAKER, chairman of the Section on the Practice of Medicine, read his Report, treating especially of the Bacillus Tuberculosis and the Germ Theory of Disease. After a few preliminary remarks in regard to the difficulty of his subject in consequence of the new theories constantly advanced, he said that in the field of pathology and pathological research the study of the infinitesimal has attracted great attention; and of the subjects prominently brought to the attention of the profession, and exciting more universal interest than any other, is the bacillus of tuberculosis and its contagious character. The causal relation of the bacillus to the disease was still an open question. Typhoid fever, yellow fever, and cholera were considered in their relation to the germ theory. Trichinosis was touched upon, and the reader defended American pork against the aspersions cast upon it by European governments, claiming that trichinosis with us is a very rare disease in comparison with its frequent occurrence in Europe. In conclusion Dr. Shoemaker referred to the tendency manifested on the part of specialists to form cliques and separate associations, and to exclude the rest of the profession from their deliberations, which the speaker characterized as an attempt to form an aristocracy in the most democratic of professions. Outside organizations on special subjects, said the speaker, will detract from the interest and advantages of our meetings, and the younger members, neglecting the general subject of medicine, dazzled by the apparent brilliancy of a select few, will wander forth to ultimately destroy their own usefulness.

These remarks were loudly applauded.

DR. T. A. REAMY, of Ohio, chairman of the Section on Obstetrics, read instead of a Report a paper upon the Operations for Laceration of the Cervix Uteri.

Drs. Buford and Stevens, representatives of the Canadian Medical Association, were invited to seats on the platform.

An invitation was read from the managers of the New Orleans Cotton Exposition for the Association to hold its next meeting in one of the rooms of the Exposition Building.

LEGISLATION RELATING TO VIVISECTION.

DR. HENRY SMITH, of Philadelphia, offered a resolution opposing legislation restricting the practice of investigation in medical science by experiments on animals, and asking the appointment of a standing committee for this purpose.

DR. DALTON said that the proposed legislation was aimed at vivisection and originated with the Anti-vivisection Society. It would prevent a professor from showing his class the process of digestion, or the circulation of blood in a frog's foot. The medical profession would coöperate with the society in preventing needless cruelty. The resolution was referred to the following committee: Drs. H. C. Wood, William Pepper, James Tyson, of Pennsylvania; Christopher Johnson, Maryland; J. C. Dalton, Austin Flint, Jr., of New York, and J. S. Billings, United States Army.

MEDICAL COLLEGES.

DR. ATWOOD, of St. Louis, offered a resolution, objecting to the general advertising of medical colleges as tending to increase the number of scholars and lower the standard.

DR. BENJAMIN, of Maryland, followed with an additional resolution, urging upon all medical colleges the necessity of elevating the standard of education, at least so far as to require a preliminary examination, a three years' course, a registry of attendance and practical demonstrations of diagnostic skill.

Debate on the resolution being agreed to, DR. HENRY, of New York, expressed his emphatic disapproval of the manner in which the medical colleges were disgracing the profession on account of the incompetent doctors which they graduated. This remark was greeted with applause and a few hisses. Dr. Henry replied warmly that there was no use in hissing, for he knew that those who hissed had private axes to grind. The resolution of Dr. Benjamin was finally adopted, and the Association adjourned shortly after one o'clock until ten the next day.

MEETING OF SECTIONS.

During the afternoon the various Sections met in the church, Medical Society Hall, and Rifles' Armory. The Section of Surgery and Anatomy met at the latter place, a large attendance being present. A resolution of respect to the memory of the late Dr. Gross, of Philadelphia, and highly eulogistic of his learning and skill, was reported by a committee consisting of Drs. J. M. Keller, chairman; Lewis A. Sayre, Austin Flint, Jr., and R. A. Kinlock, and was unanimously adopted. A paper on Railroad Injuries of the Extremities of the Human Body was read by Dr. T. R. Varick, of New Jersey. An address was delivered on Spontaneous Fracture of Calculi by Dr. Gouley, of New York. The discussion on this paper was participated in by Drs. J. Ford Thompson, of Washington; Hutchinson, of Brooklyn; Sayre, of New York; Prewitt, of St. Louis; Pollock, of Pennsylvania; Dawson, of Ohio; and others. Papers by Dr. C. A. Wheaton, of Minnesota; Dr. Joseph Ransohoff, of Ohio; and Dr. A. Pearce Gould, F. R. C. S., were read by titles only, after which the Section adjourned.

The Section on the Practice of Medicine listened to a paper entitled A Contribution to the Clinical Study of Epilepsy, by Prof. William Pepper, of Pennsyl-

vania, which was discussed by Dr. Eugene Grissom, of North Carolina, and others. Dr. Flint also read a paper, but the programme which had been prepared could not be followed for want of time. The Section on Children's Diseases heard a paper by Dr. J. W. Brown, of New York, on Diphtheria, and papers by Dr. Atlee, of Pennsylvania, and others. The Section on Obstetrics heard papers by Dr. Theophilus Parvin, of Pennsylvania, Dr. A. Reeves Jackson, of Illinois, Dr. William H. Taylor, of Ohio, and others. Dr. Engelman, of Missouri, and Dr. Campbell, of Georgia, participated among others in the discussion. Dr. B. N. Towle, of Massachusetts, read a paper before the Section of State Medicine. Papers were read before the Section of Ophthalmology, Otology, and Laryngology, by Drs. Fulton, of Minnesota, Rankin, Little, and Turnbull, of Pennsylvania, and others. The Section on Aural and Dental Surgery heard papers by Dr. Edward C. Briggs, of Massachusetts, and Dr. A. W. Harlan, of Illinois.

RECEPTION AND BANQUET.

In the evening the delegates were given a reception and banquet by the Medical Association of the District of Columbia at the armory of the National Rifles, on G Street, between Ninth and Tenth Streets northwest. At least two thousand persons, delegates to the National Convention and their wives, were present. Drs. A. Y. P. Garnett, chairman of the Committee of Arrangements, and Dr. D. C. Patterson, were in charge of the entertainment. Music was furnished by the Marine band, and dancing was kept up until about midnight. The floor committee consisted of Drs. S. S. Adams, McArdle, L. L. Friedrich, Clarke, Patterson, G. S. Magruder, H. D. Frye, and Frank Hyatt.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

S. J. MIXTER, M. D., SECRETARY.

MARCH 5, 1884. DR. C. B. PORTER reported a case of

EXCISION OF A PORTION OF INTESTINE, INCLUDING PART OF THE ILEO-CÆCAL VALVE FOR THE CURE OF FÆCAL FISTULA IN RIGHT GROIN.[1]

The reader showed several dried specimens, illustrating the anatomy of the parts involved and the portion of intestine that had been removed.

DR. CHADWICK said that he had never excised a portion of the intestine, but had had a case of tear during ovariotomy. The edges were brought together without attempting to bring the serous surfaces in apposition. Union did not take place. The possibility of washing out the intestine above and below the seat of operation in these cases, by means of a long flexible tube, was also spoken of.

In answer to a question asked by Dr. Harrington, DR. PORTER said that his treatment of abdominal wounds in the future would, perhaps, be somewhat influenced by his success in this case. In cases of pistol-shot wounds, and some other penetrating wounds where there was no certainty of escape of fæces into the abdominal cavity, it would be much better to wait until some symptoms of such a condition were present before opening the abdomen.

DR. MIXTER said that this was the first case on record where it had been stated that the ileo-cæcal valve had been excised. The difficulty experienced in uniting the large and small intestine in this case was similar to that found in uniting the stomach and duodenum after excision of the pylorus. On looking up the literature of the subject, one is struck by the fact that in almost all the cases where death has followed the operation the wound in the intestine has been found on autopsy to be thoroughly united by plastic lymph even where the patient has died from shock a few hours after the operation. Fatal results seem to be due principally to shock, which is, of course, especially to be feared in cases of long-neglected strangulation and gangrene, or else due to septic processes started by escape of fæcal matter at the time of operation into the abdominal cavity. If the operation has been performed antiseptically, and the cut ends of the intestine carefully united in the proper manner, a good result may be expected.

A general discussion on the liability of abdominal hernia as a result of laparotomy followed.

In reply to Dr. Chadwick, DR. GREENE stated that he had seen several cases, seven or eight, where this condition had resulted. These herniæ were very difficult to keep in place, the best apparatus being a well-fitted abdominal belt with firm padding. Good support should be ordered for some time after operation.

DR. CHEEVER spoke of the use of silver wire in the reported case in uniting the edges of the abdominal ring. In many cases silver wire is retained and causes no trouble, but in others it is a constant source of irritation until it is discharged. The latter seems to be most often the case when it has been used in a situation where it is subjected to pressure, or to constant movement.

DR. DOUGLAS GRAHAM read the following extracts from a letter received from a patient who is afflicted with

BRITTLE BONES.

"I will now try to tell you what I can about my numerous accidents. The whole number of breaks is eighteen. I can remember fourteen of them. Mother thinks the first was the left arm at the elbow, caused by stumbling against the stove zinc when I was eighteen months of age. Then occurred a few breakages about the location of which we are uncertain. After these came a fall from a chair, breaking my right collar-bone, which I remember very well, although then hardly three years old. At four years of age stepped backward from a door-step, breaking my left leg between the knee and ankle. Before I was five, fell on the carpet and broke right elbow. A few months afterwards broke right elbow again. At eight had broken each arm again at the elbow, one of these caused by a fall from a swing, and the other at school. As soon as possible after these breaks I slipped on a wet plank and broke right leg between knee and ankle. Before this was well I tried to walk a little while mother was out and broke the same leg again at the same place. When a little past nine years of age I fell on a stone sidewalk and broke the right elbow, or rather the ends of both bones about one inch below the joint, dislocating them, and injuring the shoulder so that I can still turn my arm with the point of my

[1] See page 457 of this number of the JOURNAL.

elbow in front. It was not set, but makes a useful arm after all.

"I had no more accidents, except a sprain or two, until I was thirteen, when a little dog ran against me and then I fell on the pavement and broke my left collar-bone and some other bone about the shoulder. At fourteen broke one of the bones between the elbow and wrist. At eighteen fell through a hole in the sidewalk and broke the point of right elbow, and this made quite an improvement in the looks of it. At eighteen a mischievous horse chased me. I ran, and on reaching the plank walk stepped so quickly that my left ankle was broken through the joint. That was the worst break I ever had, and I was lame a long time after it.

"These are all the accidents I can remember. Mother kept an account of the number. The summing up is: —

"The right arm, broken nine times; the left arm, twice; left leg, three times; right leg, twice; right collar-bone, once; left, once. Total, eighteen.

"I used to be extremely lame and suffer very much on going to school, especially in winter when the walking was rough by reason of ice, or any inequality of surface, and any slight twist or wrench of my limbs would cause extreme pain. Since I have attained my growth I have been much better, and I have met with no accident for fourteen or fifteen years, except while in Boston I sat down before I was quite ready.

"It may be of interest to you to know that my father broke his bones fourteen times, a cousin of his twenty-one times, and the latter suffered from breaks after he was quite an old man. My father's paternal uncle was also a bone breaker."

NEW YORK ACADEMY OF MEDICINE.

AT a stated meeting of the Academy held Thursday evening, May 1st, DR. J. G. ADAMS read a Memoir of E. L. Beagle, M. D., after which DR. MARY PUTNAM JACOBI read a paper entitled

SOME CONSIDERATIONS ON ENDOMETRITIS.

She started out with the proposition that the endometrium was the essential part of the utero-ovarian system. The two cycles, the greater one of pregnancy, and the lesser one of menstruation, peculiar to this germinal membrane, were, she claimed, completely homologous, and endometritis always had its origin in subinvolution following the one or the other of these cycles. Parenchymatous metritis, again, always depended on disease of the mucous membrane, while nearly all utero-ovarian disorders could be traced to the same origin. The ultimate aim of all treatment in this class of affections was, therefore, the restoration to its integrity of the menstrual cycle, and for both the success and the safety of the measures employed it was essential that the rhythmical character of this process should be taken into consideration.

In view of these considerations a slight uterine catarrh became a matter of great significance. A diseased condition was not to be studied as an isolated fact, but in relation to its origin, connections, and possible results; and it was because the tissues of the highest function were always the first to become affected in any pathological process that endometritis was the original factor in utero-ovarian disease, and that it assumed such grave importance. Dr. Jacobi then advanced the hypothesis that at the time of menstruation the accumulation of blood in the periuterine and ovarian plexus of veins caused new growth in the lining mucous membrane of the uterus, and that this development of the endometrium continued (unless pregnancy occurred and the greater changes peculiar to its cycle resulted) until the new growth was arrested by pressure, which finally resulted in the rupture of vessels giving rise to the menstrual hæmorrhage. The further growth of the venous plexus was also arrested by pressure. The true cause of menstruation on this theory was, then, the emptying of a vascular reservoir with the development of new material. There was thus a successive growth of the endometrium exactly similar to that of the ovarian cortex, and these two parts of the utero-ovarian system were physiologically linked together in the closest possible manner. It was extremely rare to have ovarian disease without preceding or accompanying endometritis, though the latter was not always associated with ovaritis. There were three essentials for normal menstrual hæmorrhage, namely, (1) the complete emptying of the venous reservoir; (2) prompt evacuation of the uterine vessels; (3) no remaining distention of veins. If the process was not completely accomplished the membrane would become thickened when the next cycle of growth occurred, on account of the venous hyperæmia still remaining from the preceding cycle. Consequently there would be a successive development of abnormal tissue, and the result of this would be chronic endometritis of catarrhal, vegetative, or other character, with its pain in the back and hips and other characteristic symptoms dependent on the condition of the ovario-uterine nerves. Many of the symptoms were those common also to pregnancy, such as nausea (which was never met with when the cervix alone was affected), vasomotor derangements, headache, and cerebral disturbances. Such symptoms were also observed in connection with cases of central hysteria where no pelvic lesions could be discovered, but it was probable that in these instances there had been a temporary endometritis present. The following symptoms were considered as pathognomonic signs of endometritis: (1) pain resulting from the introduction of a probe into the uterine cavity; (2) hyperæmia as indicated by the hæmorrhage excited by the passage of the probe, and (3) tenderness of the fundus uteri when pressure was made upon it through the abdominal walls. Dr. Jacobi denied that there was such a thing as ovarian dysmenorrhœa. Whenever there was pain during menstruation in cases with ovaritis it was uterine and not ovarian. The characteristic of pain from ovarian disease was that its maximum intensity was reached during the premenstrual week, and that it was relieved when the flow came on.

One of the serious effects of endometritis was periuterine inflammation, and on account of the tendency for this to occur it was of paramount importance in the treatment that the rhythmic character of the menstrual process should be kept in view. The limits of danger, she believed, were insufficiently defined in the minds of the profession. After the close of the first week after the flow ceased the danger of setting up periuterine inflammation by making applications to the uterine

cavity commenced, and it was therefore unsafe to practice such treatment for two weeks before the beginning of menstruation.

Another important effect of endometritis was the production of uterine flexions. This was due primarily to the softening of the uterine stem in consequence of the inflammatory process. If the latter was confined to the cervix alone, no such result would follow; but if it extended to the cavity of the uterus there was always danger of such accidents. The production of uterine flexion was then illustrated in the case of a girl suffering from chloro-anæmia. There was, first of all, low arterial tension, and after a time, as a result of this, leucorrhœa (due to cervical catarrh). Finally, after some years, perhaps, endometritis ensued; the fact of the extension of the trouble above the cervix being first indicated by the commencement of pelvic pains. Then, and not till then, would flexion of the uterus be noticed, unless it was one of those exceptional cases in which the flexion was congenital. The uterus was enmeshed in a fibro-muscular structure similar in character to its own tissue, and of which, indeed, its parenchyma was only a more condensed portion. Now the characteristic tendency of such fibro-muscular tissue was to contract, and hence when the uterine stem became softened in consequence of the presence of endometritis the contraction of the round ligaments would naturally produce anteflexion. Retroflexion, on the other hand, was a paretic phenomenon, and the essential prerequisite for its occurrence was relaxation of the round ligaments. In retroversion there was relaxation of the utero-sacral ligaments also, and in complete prolapsus there was a total collapse of all the ligaments. A permanent cure for displacements was not to be expected, therefore, from simply holding the uterus in position by means of a pessary, except in very rare instances where the condition has been merely temporary.

The treatment of endometritis naturally resolved itself into three parts. In the first place, whatever would be of service in raising the arterial tension throughout the body, and especially in the pelvis, would do good, and among the agencies recommended were hydro-therapeutics, counter-irritation by means of sinapisms, etc., faradization, general gymnastics, and the health lift. Some such general measures were indispensable in all cases. In the second place, local treatment of the endocervitis existing in connection with the endometritis was advised. The dissipation of the hyperæmia of the cervix might, perhaps, affect the latter condition so favorably that no applications to the cavity of the uterus would be required. For this purpose iodine was often of great service, on account of its stimulating effect upon the pelvic circulation. In many cases, however, it was dangerous on account of this, and, as a general rule, in proportion to the sluggishness of the circulation would it be found efficient. In the third place, if, after a time no effect was produced upon the endometritis by the treatment of the cervix alone, direct local applications were to be made to the cavity of the uterus. The utility of this procedure and the character of the agents to be used for the purpose had excited much violent controversy, and different authorities had expressed widely different opinions. After recapitulating the advantages to be derived from such applications, and the dangers which were liable to result from them, Dr. Jacobi went on to say that it was necessary to define what was to be expected from the treatment before entering upon it.

In regard to the use of astringents she said that it was impossible to expect any benefit from the application of such agents to the uterine vessels while in a state of growth, as indicated by the successive development of neoplasm. This was well illustrated in nævi, where the use of astringents was of no value. An application that was really of service would have the effect of destroying abnormal tissue, modifying the condition of the blood-vessels by reflex influence, and imparting a healthful impulse to the movement of growth, which would moderate its extent at the succeeding menstrual cycle. The time when neoplastic tissue could be most successfully destroyed by such applications was when it was at its lowest point of activity, and that was during the first week following menstruation. As before mentioned, two weeks before the occurrence of menstruation the danger of exciting peri-uterine inflammation commenced, and it was therefore important that the time for such applications should be limited exclusively to the week following the period. Another point of importance to observe was that the effect of one local application must have completely subsided before another one ought to be made. Such applications were always liable to cause a certain amount of irritation, which was analogous to that occasioned by scraping the periosteum in scrofulous subjects. Once in two months in some cases was as often as it was desirable to repeat them. In order to make the application satisfactorily it was sometimes necessary to dilate the canal by means of tents, and this was attended by more danger when ovaritis than when parametritis was present. Every intra-uterine application was to be regarded as a surgical operation which was only to be performed at the house of the patient, who should remain in bed for the rest of the day, and if a tent had been used, for three days afterward. Having expressed a preference, as a rule, for the use of the strong mineral acids, and particularly nitric and chromic acids, for the purpose, Dr. Jacobi stated that the proper effects of the treatment would be observed (1) in the diminution of leucorrhœa, (2) in the relief of the pains in the back and hips, and (3) in the less painful character of the next menstruation. Intra-uterine applications were never to be made unless the patient suffered from some form of dysmenorrhœa. In conclusion, she said that this procedure was confessedly attended with certain disadvantages and dangers, and that the reason why she advocated it was because results could be achieved by this method which were unattainable by any other means.

Dr. B. F. Dawson remarked that the position taken by Dr. Jacobi in regard to so-called ovarian dysmenorrhœa, that the pain was always premenstrual and was relieved when the flow commenced, would seem to be a sound one on theoretical grounds; but at the same time he had undoubtedly seen cases in which no trouble of any kind whatever except ovarian disease could be detected, and yet in which the pain continued throughout the whole menstrual period.

Dr. Paul F. Mundé thought that as a rule in endometritis (which, he agreed with Dr. Jacobi, was due to subinvolution, either menstrual or puerperal), the external os was widely gaping, and that the internal os was also considerably distended. This he regarded as one of the signs of endometritis as well as those which had been mentioned. He considered it of great im-

portance that the treatment should be commenced at as early a period as possible (just as soon as the condition was recognized), since the longer the trouble continued the more difficult it was to cure, if it could be cured at all. When pelvic cellulitis and peritonitis were present, it was necessary to remove the uterine catarrh on which they depended; but, at the same time, it was not to be forgotten that the use of intra-uterine applications was liable to set up additional inflammatory trouble. He could not agree with the author of the paper that parametritis was principally dependent on trouble at the fundus uteri, as his experience had indicated that it was more frequently associated with disease of the cervix, which he believed was on account of the closer lymphatic connection with the latter. The same, he had found, was true in regard to ovaritis, and hence he was always afraid to treat disease of the cervix if the ovaries were affected. Having spoken of erosion of the external os as another sign of chronic endometritis which Dr. Jacobi had omitted to mention, and stated that fundal tenderness (through the abdominal walls) was also an indication of areolar hyperplasia, as well as endometritis, he said that he thought the author's theory of uterine flexions was an ingenious and plausible one. In regard to the treatment of endometritis (which he considered in the majority of cases was merely palliative), he thought the applications must be made from the fundus downward, and not the reverse, since if they were made first to the cervix the discharge from above would be a continual source of fresh irritation. He agreed with Dr. Jacobi that it was the stronger remedies that were of the greatest service, and there was one means that had not been mentioned which he often found of much benefit, particularly in cases attended with menorrhagia, namely, the use of the dull curette. After employing it he applied a caustic to the mucous membrane. He thought it was not necessary to dilate the canal, as a rule, and this was to be especially avoided if there were any parametritis present.

DR. W. GILL WYLIE referred to the not infrequent presence of salpingitis as a complication of endometritis, which rendered it incurable. The influence of specific disease, he thought, was also to be taken into consideration, and this was very apt to be associated with salpingitis. In the treatment he spoke of the advantage of rest. During the acute stage local treatment was more or less dangerous, and he thought it was often best to wait six months, in the meanwhile employing preparatory treatment, which he thought was of great importance. Applications to the vagina were very useful, and for this purpose he preferred tampons of pure glycerine, or of glycerine and alum. He thought that dilatation of the uterine canal was absolutely necessary in a great many cases, and for this purpose he employed Sims's dilator. He had given up the use of tents long ago, except in very rare instances. In making intra-uterine applications it was usually best to place a tube in the cervix first, so that the agent employed would not be rubbed off the applicator before it reached the fundus, the direct medication of which he regarded as a very important point. If it was necessary to use tents he had them prepared with a large percentage of iodoform, so as to render them antiseptic, and he said he also used iodoform in connection with all vaginal tampons.

DR. MARY PUTNAM JACOBI thought that a very tight condition of the internal os was very common. She said she had not referred in her paper to salpingitis and gonorrhœal trouble, because she was speaking only of homologous disease, and not of heterologous, which depended on infection, and was altogether a different matter. The prognosis in endometritis depended a good deal on the nature and general condition of the patient. In those with chlorotic tendency and imperfect development, and in those who from any cause had been reduced to a condition of exhaustion, it was much less favorable; but it was, unfortunately, too often the case that the treatment was exclusively local, instead of being directed to the improvement of the general system as well.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

MARCH 12, 1884.

Meeting called to order at eight o'clock. Dr. Edes being absent, on motion of DR. J. W. FARLOW Dr. E. T. Eastman was elected chairman *pro tem.* A summary of the records of the last meeting was given by the Secretary, which was approved.

The first paper of the evening was by DR. G. LIEBMANN, entitled

SPINAL IRRITATION AND NEURASTHENIA.[1]

DR. S. G. WEBBER in opening the discussion said that the difference between neurasthenia and spinal irritation is not so definite as the author states in the paper to which we have listened. The two diseases depend upon similar conditions. The distinctions made in the paper are purely arbitrary. The two affections run into each other. That state or condition which the author calls "false spinal irritation," depending on irritation of the pelvic organs, cannot be too constantly kept in mind. We do not always realize how much disturbance may arise from this cause, not only in women but also in men. Dr. Webber is far from satisfied with the usual explanations of spinal irritation, and does not believe that anæmia or hyperæmia of the cord is a necessary or universal condition. In many cases there may be at times excess and at other times deficiency of blood supply. In most patients it is doubtful if the symptoms depend on disturbances of the circulation. There is probably an exhaustion of the nerve cells, often in the brain, sometimes in the cord or in the sympathetic system. Their reactions are irregular, and disturbances of function and secretion result. Heredity exerts a grave influence in neurasthenia and spinal irritation, and is an important ætiological factor in these diseases. In such cases the parents, frequently one, often both, have not strong and vigorous constitutions. The scenes and influences of childhood are sometimes at fault, and the neurotic condition may be developed where there is no hereditary tendency. Late hours are not beneficial to children, but predispose to the various neuroses. We do not see children romping and playing nowadays as was the habit years ago, but they go to evening parties, sit up late, and eat stimulating food at unseasonable hours. Too warm and ill-ventilated rooms

[1] See page 460 of this number of the JOURNAL.

are also doubtless predisposing factors in the production of nervous diseases. Our school-rooms are often kept at a temperature of 72° F. to 75° F. Children are also sent to school at too early an age, and are thus exposed to unfavorable influences at a perilous period in their nervous development, and frequently become the subjects of neurotic derangements.

Dr. J. J. Putnam said that he did not believe that there was any clinical or pathological advantage in trying to draw a line between neurasthenia and "spinal irritation," so called.

The former term, although vague, is a convenient one, and does not, like the latter, prejudge the pathological diagnosis. Our knowledge of the functions of the spinal cord does not justify us in referring the majority of the symptoms of so-called "spinal irritation" to disease of that organ. On the contrary, the complicated cerebral functions, including those which have to do with the animal and vegetative processes, probably are affected in all the cases of this class, and this affection furnishes their predominating characteristics. It is on these functions that the evil influences transmitted by heredity mainly fall.

At the same time it is not to be denied that the ganglia of the spinal cord and sympathetic may share in the disorder. Dr. Putnam agreed with the reader and with Dr. Webber that the tendency has been to pass slightingly over the nervous symptoms to which diseases of the male genital organs may give rise, although it is true that congenital instability of the central nervous system is usually needed to furnish the material for these symptoms.

Dr. Douglass Graham said he thought we were inclined to be myopic in limiting our observation to reflex neurasthenia arising from irritation of the sexual organs alone, even if this were one of the most frequent causes. Pain or disturbance in any organ, especially below the diaphragm, he said, gave rise to reflex neurasthenia. Indeed, neurasthenia forms the background to the picture of all diseases and injuries whether of an organic or functional nature. The simplest form of neurasthenia is the natural and not unpleasant fatigue which results from an active and satisfactory day's work, from which we recover by food and sleep. After this comes the fatigue from which we do not recuperate as usual, the fatigue of being overworked, or in common parlance "played out," when rest and change are of the first importance. Thirdly, there are the continually wearied, wakeful, nervous business or professional men with numerous and varying ailments who have learned by experience that "the labor they delight in physics pain," and who find more relief in work than in rest. Many physicians, doubtless, find themselves in this class, especially at this time of year. Then there are the neurasthenics who are such because they have no object in life, who are spoiled children with plenty to live on and usually more, who can do what they please and cannot do what they do not please, who take delight in telling of all the eminent medical authorities whose care they have been under without benefit, and who are never happier than when they can be regarded as interesting, by trying some method of treatment that is novel to them, so that they may finally have the satisfaction of saying that it did them no good. A classification of neurasthenia based on causation might be indefinite.

Dr. G. L. Walton considered the brain the chief if not the only sufferer in the cases under consideration. Certainly such symptoms as cramps and pain in the back and loins could arise from the brain as well as from the cord, while the mental symptoms could only arise from the brain. Whether the spinal centres were implicated or not, enough had been said to show the non-existence of a distinct class of cases to be gathered under the term spinal irritation. In this case further division into pseudo-spinal irritation was absurd. He thought that all we could say by way of pathology at present was that there is a large number of nervous patients whose symptoms fall neither under hysteria nor hypochondria, whom we may name neurasthenical, locating the functional disturbance in the central nerve cells. It remained to inquire if the sub-classification proposed would prove of clinical value. The impression conveyed by the paper was that the practitioner had only to ask himself whether the patient before him suffered from neurasthenia, spinal irritation, or pseudo-spinal irritation, and to regulate his treatment accordingly. In point of fact all these cases had to be treated as individuals, one needing rest, another exercise, and so on, any attempt to treat in classes being destined to prove a failure.

Dr. Morton Prince spoke as follows: There is one point which has been raised here on which I wish to say a few words, and that is the question of the cerebral origin of the symptoms of spinal irritation. I cannot agree with Dr. Putnam as to the cerebral origin of these symptoms. This view has lately been advanced with considerable force in an article by Dr. Walton. That some of the symptoms met with in spinal irritation, or neurasthenia (as you may choose to term it), such as vertigo, melancholia, anorexia, pains about the scalp, mental weakness and irritability, and many symptoms distinctly hysterical, are cerebral in their nature every one admits. About such symptoms there is no question. But that there is another larger group of symptoms which are of spinal origin I believe there is also no question. Such symptoms are numbness and pricking in different parts of the body, pains over the spine, neuralgic pains of all kinds. In some cases of nervous prostration the cerebral symptoms may be so prominent as to predominate. Such cases have been denominated *cerebrasthenia* in distinction from others where the cord and nerves are principally implicated.

When a functional nervous disease is met with the symptoms presented are individually such as are caused by organic disease of the same segment, the difference being due not to the essential character of the symptoms, but to the method of grouping, the absence of some symptoms and presence of others, the onset, course, severity, etc. The symptoms met with in functional disease of the cord are such as occur in organic disease of the same part, and the symptoms observed in functional disease of the brain are such as occur in organic disease of the brain. In other words, the symptoms caused by functional or organic changes in a part are conditioned by the physiological functions of the part. For example, we get atrophy with the electrical reaction of degeneration in the muscles of the limbs from organic disease of the anterior cornua of the spinal cord and not from disease of the brain, and conversely we get aphasia from disease of the brain and not from disease of the cord. Now the group of symptoms met with in pure spinal irritation (?) are such as are met with in organic disease of the cord and not of the brain; and therefore there is every reason to believe that their

origin is spinal and not cerebral, and especially is this the case when in severe cases the symptoms are so similar to, nay, almost identical with, those produced by inflammation of the cord and its membranes that it may fairly be questioned whether we have not to do with an organic and not a functional disease. I cannot help thinking that some cases which have been described as spinal irritation are in reality mild forms of inflammation.

I do not mean to say that some of these symptoms may not occur isolatedly in organic brain disease. That may happen with some symptoms, as, for example, anæsthesia and paralysis, which are common to both spinal and cerebral disease. But they do not occur in similar groups, and some symptoms are not present at all. In functional brain disease nearly every kind of symptom may be met with, but here the grouping is different, and it is a question whether some of the symptoms of functional brain disease, as hysteria, may not be dependent upon implication of the cord. In fact this is much more likely than that the fundamental symptoms called spinal irritation are due to cerebral disease.

As this is a practical and important question it may not be out of place here to refer to the argument advanced in the paper I have just mentioned. Pains in the back and sensitiveness over the spine are referred to irritability of the *cerebral* centres, because the centres for *feeling* are in the brain and not in the cord. A similar process of reasoning would as well explain the pains and tenderness complained of in sciatica, spinal meningitis, and myelitis by a disease of the brain.

In regard to the differentiation of spinal irritation from neurasthenia, Dr. Prince was glad to hear Drs. Webber and Putnam express doubts as to whether they could be regarded as distinct diseases. If we examine the descriptions of spinal hyperæmia, anæmia, irritation, and neurasthenia given in the text-books, it would be found impossible to form any clear and definite picture of each as distinct from the others. Erb, to be sure, had described neurasthenia as characterized by being more common in the male sex, while the symptoms exhibited were principally sexual and motor weakness, sensory disturbances being less prominent. Spinal irritation, on the other hand, he had practically limited to females, while the sensory disturbances were very prominent. Ross, in England, had followed Erb's description. In America, on the other hand, the speaker thought that it was the general experience of neurologists that neurasthenia was greatly more common in women, while the group of symptoms included under the name was identical with that described in Germany and England as spinal irritation. It did not seem, then, that there was sufficient grounds for differentiating two diseases.

It is possible that the disease could be occasioned by molecular changes in the spinal cord without having resort to the theories of anæmia or hyperæmia. Sigmund Mayer has made some investigations on the changes which physiologically occurred in normal nerves. His observations were made on the nerves of a large variety of animals and also of men, and showed that the peripheral nerves of vertebrates are not fixed structures, but are continually going through a process of degeneration, followed later by regeneration and a return to the normal condition. The changes observed were similar to those which take place in a nerve which has been divided or otherwise injured. These changes he believes to be constantly taking place, so that in every nerve may be found a number of fibres in this condition.

The thought naturally suggests itself whether these changes may not play some important part in the production of functional nervous diseases. Mayer suggests that this may be the case, and that those neuroses represented by transitory impairment of the sensory and motor functions are due to an increase in the normal number of degenerated fibres, and thinks that these changes are destined to become prominent factors in future neuro-pathology. If these results shall be confirmed by other observers, we have here a means of understanding how disturbances of sensation and motion such as are met with in neurasthenia may be caused by molecular changes alone, and this thought is reenforced by the fact, that while the anatomical changes which are said to occur in normal nerves are similar in kind to those observed in an injured nerve, differing only in degree, so many symptoms met with in spinal irritation (neurasthenia), such as formication, numbness, pain, muscular weakness, etc., are similar in *kind* to those caused by injury to a nerve, though they differ in degree, grouping, mode of onset, and persistency. If similar changes shall also be shown to take place in the central nervous structures, we shall have a complete theoretical picture of anatomical changes which may be at the bottom of neurasthenia.

The idea at present is merely speculative, but is interesting as suggesting a direction for future investigation.

(To be concluded.)

Recent Literature.

The Medical Register for New England. By FRANCIS H. BROWN, A. M., M. D. Boston: Cupples, Upham & Co. 1884.

Perhaps if it were known as the Medical Directory the object of this book would be more easily recognized; but it is very much more than a directory, it is a register not only of the regular physicians of New England, but of all sorts of information more or less remotely connected with the subject of medicine. It contains a list of Associations and Societies: Medical Schools and Kindred Institutions, Hospitals and Dispensaries, Benevolent and Charitable Asociations and Asylums, information in regard to Miscellaneous Matters, beside the Directory and Business Guide. The Directory contains an alphabetical list of the members of each State society, and also a local list in which the physicians of each town are given.

This list of subjects fails, however, to give a just idea of the valuable information which the book contains. The last edition was published in 1880. The labor and time spent in the preparation of the new edition, which contains increased material as well as the changes that have taken place during the four years, must have been enormous, and we trust a generous support at the hands of the profession will show the author that his labor of love is duly appreciated.

— The published report of an English benevolent society says: "Notwithstanding the large amount paid for medicine and medical attendance very few deaths occurred during the year."

Medical and Surgical Journal.

THURSDAY, MAY 15, 1884.

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THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION AT WASHINGTON.

THE thirty-fifth annual meeting of the American Medical Association at Washington has been from many points of view a peculiarly successful one. About thirteen hundred delegates were in attendance, and a fair proportion of time was devoted to the transaction of business and to hearing and discussing papers. The work in the Sections was not all of equal merit. Some of the Sections, however, and notably those on the Practice of Medicine and on Obstetrics and Diseases of Women and Children, were prepared for with unusual care, and their programmes offered many interesting titles and strong names. Several of the papers read in these Sections were excellent. Unfortunately, the programmes were out of proportion to the time allowed, and several members who had taken much pains in their preparation, and came a long distance for the purpose, were unable, after all, to read. This was especially the case in the Section on the Practice of Medicine. Such sources of disappointment and dissatisfaction should be avoided if possible. It is, of course, not always easy to accomplish this, and it is quite as undesirable to have to cut short a profitable and animated discussion of a suggestive paper already read as it is to leave unread a paper on another subject. One tendency should certainly be summarily dealt with; we refer to the practice of reading a roll of previously-prepared manuscript, more or less germane to the subject in hand, instead of discussing the views set forth by the reader of the regular paper itself.

The subject of Ethics was not brought prominently forward, except in the address of the President of the Association, Dr. Austin Flint, his remarks being referred to a committee for consideration. As at the last meeting, delegates were required to sign an agreement to support the Code and the laws of the Association. We do not learn that any one felt persecuted, unless it may be some gentlemen in the State of New York. The difficulty about the Code seems to have narrowed itself down to a squabble between New York and the rest of the country. One loyal delegate from New York we thought justly aggrieved at being asked if he had signed with mental reservations, and apparently for no other reason than his coming from that State.

The President's views as to the reforms required by many American medical colleges were evidently not sufficiently advanced to satisfy a large and influential portion of his audience.

The appointment of a committee to invite the International Medical Congress of 1887 to meet in this country was a very suitable step, and we understand the chairman thinks it probable that the proposal will be favorably entertained.

The public collections, the agreeable excursions, and the generous hospitality of the city were thoroughly appreciated by the delegates and their families, and undoubtedly added much, as was to be expected, to the success of the occasion. For further details readers are referred to our Washington letter and to the reports of the meetings.

THE THERAPEUTICS OF EARLY RISING.

THE subject of early rising has a physiological and a therapeutical aspect.

It may be laid down as a general proposition, applicable to the great majority of men, women, and children in health, that the proverb "early to bed, early to rise," etc., embodies sound common sense, and is safe to follow, enabling those who conform to it to perform the greatest amount of work of which they are capable with economy of time, of eyesight, of nervous energy, and of the general health.

The tendency of modern civilization has been to lead people greatly to disregard nature's law (to which the inferior animals generally conform), whereby night is the time for rest, and day is the time for toil. This law is a result of natural selection, as pointed out by one of its great apostles. "An animal so constituted that waste and repair were balanced from moment to moment throughout the twenty-four hours would, other things equal, be overcome by an enemy or competitor that could evolve greater energy during the hours when light facilitates action at the expense of being less energetic during the hours of darkness and concealment."

Early rising is the proper sequel of early retiring, and when recommended as a hygienic rule it is with the presupposition that ample time — which with every individual is a fixed quantity — shall have been devoted to sleep.

The majority of laboring people, in accordance with the necessity in most adults for about eight hours' sleep a day, have wisely chosen the period between nine o'clock in the evening and early morning, and farmers who, retiring in the summer at dark, arise at daybreak, testify to the extraordinary salubrity of the morning air. The atmosphere then is cooler and more invigorating, more heavily charged with oxygen, than later in the day when rarefied by the heat of the sun. There is no time so favorable for exercise, as students well know who are in the habit of taking long walks or practicing gymnastics in the morning before breakfast. An hour spent in exercise at this time of day will fortify a student more than two hours of bodily training at midday, and this season should be chosen for physical rather than for mental exercises.

If sufficiency of sleep be necessary, excess of time

spent in repose is enervating and harmful; it promotes languor of the circulation, and thus induces torpor and congestion of the viscera; it interferes with the energetic performance of the respiratory function, on which the due oxygenation of all the tissues depends; muscular tonicity and nerve nutrition are also enfeebled by prolonging the season of sleep.

From what has been above said it may be inferred that in pathological states characterized by deficient metabolism of nitrogenous waste elements, where, in common parlance, the biliary function is said to be deranged, early rising, with exercise in the open air, will be of powerful therapeutic efficacy. The blood is charged with the products of defective oxidation, the result of over-eating or over-work (or both combined), and all the symptoms of liver indigestion ensue. Here the best hygienic advice is that of old Dr. Abernethy, "An axe, a cord of wood, and five o'clock in the morning!" Under this regimen the "biliousness," with its attendant headaches, malaise, loss of appetite, etc., will often disappear as if by magic. If it is "the early bird" that catches "the worm," it is the early bird that can digest the worm. Dr. Abernethy's advice applies to many cases of simple dyspepsia, which will be more speedily and permanently benefited by early rising than by wine bitters and pepsine; it may also be indicated in gout and diabetes, which are diseases of mal-nutrition.

As for nervous disorders, those characterized by spasm are, as a rule, more amenable to this kind of hygiene than paretic diseases, a recumbent posture increasing spinal reflex activity. Epilepsy and hysteria have both been benefited by the establishment of correct habits of sleep and by early rising, and to a certain class of debilitated young men (with whom every physician has much experience) no counsel is more important than to rise as soon as the first sound sleep is over. As for cases characterized by exhaustion and loss of power (neurasthenia and the paretic diseases of the nervous system), long-continued rest is often the only treatment that does any good. The damaged nervous elements have lost the power of rapid recuperation under sleep, and early rising would, in such patients, be a cruelty if not an impossibility. Reserve force is lacking, and morning weariness is often overpowering. Other persons are neurasthenic from want of a proper hygienic education, and cannot be too much exhorted to curtail the hours devoted to enervating inaction. To such patients the effort, persisted in, of early "springing from the bed of sloth," and engaging in some energetic occupation, is a victory over their infirmity.

In anæmia and chlorosis a "morning air bath" (as Dr. Franklin styles it) is often more beneficial than a course of iron and arsenic.

The victim of insomnia must sometimes, perforce, lie abed in the morning; hours lost in vain attempts to go to sleep may be partially made up by prolonging the season of rest, and subsomnolent states are, as Dr. Crichton Browne observes, the next best thing to sleep. For the great majority, however, of people who are not bedridden a matinal walk is better than medicine.

LEPROSY IN THE HAWAIIAN ISLANDS.

THE report of a recent suit for libel in Honolulu, brought by a Dr. Fitch, one of the Board of Health, against the proprietor of the *Saturday Press*, furnishes information of much interest and importance in relation to the present condition of leprosy in those islands, and explains why the disease still prevails so extensively in spite of the law of segregation. The editor of that journal had published an article exposing "the criminal mismanagement of leprosy in these islands by the Hawaiian Board of Health, of which body Mr. Gibson, the premier, and Dr. Fitch were the officials chiefly responsible."

During the trial Dr. Fitch, who was the principal witness of the prosecution, testified that leprosy is the last stage or form of syphilis, that its period of incubation is twenty-five days, that in most cases it is not contagious, and that in old persons it has passed the contagious period. Several witnesses for the defense testified that he had claimed to be able to cure leprosy, and it appeared that his diploma and professional antecedents were of doubtful character.

Among the physicians called to give evidence for the defense was Dr. Trousseau, a member of the examining board who send lepers to Molokai, who stated that he had been studying the disease in the islands for twenty years, and had sent some seven hundred lepers to the hospital. He believed it to be fully as contagious, if not more so, than syphilis, and that it was contracted by absorption or inoculation, by contact with the abraded portions of a person's body, by the lips in using a pipe, by the mouth in eating poi, or by sexual intercourse. He regarded anything but segregation as dangerous. He had never known an authentic case of cure. The period of incubation in his opinion was probably six or seven years, the proof being that no young children have it, although suckled by leprous mothers, the disease appearing after a lapse of about this number of years.

Dr. Emerson testified that he received his medical education in the Harvard Medical School and in New York. Had practiced in Honolulu between four and five years. Had had charge of the leper settlement at Molokai for the greater part of eighteen months. He believed that the disease was contagious in about the same degree as syphilis and under similar conditions. As a rule Hawaiians lack proper fear of leprosy. With regard to the period of incubation, it was his belief that five years was an average and considerably under the maximum. He had not known of a case of continuous improvement of five years, treated or untreated.

W. M. Gibson, Premier and President of the Board of Health, stated that he had been present with his majesty when lepers were discharged by order of the Board on Dr. Fitch's statement; that some forty or fifty were discharged from the branch leper hospital in one year, and about twenty from the leper settlement since Dr. Fitch's administration. That he had never known of lepers being discharged as cured during the administration of Dr. Emerson. He had al-

lowed an article entitled Lepers Cured and Discharged to appear in the paper of which he is proprietor.

Several discharged lepers were then introduced and found to be in an active state of disease.

The following extracts from Mr. Dole's address to the jury reflects the feelings of a portion of the community there concerning the disease, and are commended to the attention of our own National Board of Health: —

"This is a case in which the most important question before the Hawaiian nation is being tried on its merits. The community have from time to time become alarmed on the question of leprosy, and then the rush of business and other interests have driven it aside, and society with its pleasures and its cares has allowed itself to go to sleep in the face of the greatest danger that has ever threatened it. It is well that society should be awakened from this sleep, and I believe that this case of libel you have been so long considering, in which Dr. Fitch is the prosecuting witness and Mr. Thrum the defendant, will accomplish this.

"Leprosy is the worst known disease of the present and historic times. It has successfully defied medical skill. Physicians have not been able to say whence it comes or to explain its laws. It has always and everywhere been found to be incurable. It attacks all races and all classes; no rank in life is safe, adults and children are alike exposed to its ravages. Medical skill can make no limit, no assurance can be given from the lessons of experience against this most terrible, most loathsome, and most hopeless of all human diseases. But Dr. Fitch has come, like a new Columbus breaking an egg, to tell the people of this nation that leprosy is identical with syphilis, a disease which is remarkably amenable to medical treatment, and is undoubtedly curable. It is for discussing this theory of Dr. Fitch and criticising his statements and methods in applying it, that the defendant is charged with the crime of libel. The subject is one of vast interest to the whole community. Nearly all of the physicians of this country have been studying the disease of leprosy for years; they have not hesitated to expose themselves to its contagion, have patiently investigated its nature, trying to discover some clew that might lead them to some method of treatment which would conquer a disease which has hitherto been found unconquerable. All the physicians here agree, with one exception, and that one exception is Dr. Fitch, that leprosy is altogether distinct from syphilis. All the great medical authorities over the world, without exception, support this view. Upon this question depends the moral, social, and commercial future of the Hawaiian Islands. . . .

"Now the existing management of this matter of leprosy is more important to this community than any other question. It goes to the pocket of every taxpayer. It is a menace to property, to society, to health and life. It is the great public question, and Dr. Fitch is its principal exponent. The legislature and the government have given him great powers. He is the chief executive officer in the treatment of leprosy. He is an agent of the Board of Health, with the law and the police at his back. He has more power for good or ill than any other officer in the kingdom; and though his rank may be lower and his salary less than that of other officers, he holds to-day the most important office under the Hawaiian government, for on the proper exercise of the authority of his office depends the health, the wealth, and the future of the realm; and if he may not be held to a strict accountability, if his methods and professional conduct be not fair subjects of newspaper inquiry and condemnation, then there is no such thing as freedom of the press and free speech in the kingdom. We all know something about leprosy. . . . Life to the leper is worthless, and worse than worthless. He is loathsome to others, and most loathsome of all to himself. In the Middle Ages leprosy extensively prevailed, and segregation and nothing else has driven it into the corners of Europe. How is it here? I tell you, gentlemen, the government is playing with this disease. *When you see the king and the Board of Health, all laymen, going on a kind of picnic party to the Kakaako Hospital, taking with them one — only one — physician out of the three medical inspectors of lepers, examining the patients, having them stripped, and, upon the advice of that one physician with his unsupported theories, turning nine of them loose upon the community, and then writing the affair up in a newspaper,* I say it is worse than child's play. And they dare to do this when every medical man in the kingdom, except one, says that such action is dangerous to the public at large, — and that one is Dr. Fitch, the prosecuting witness in this case. . . . We have had medical testimony that leprosy is seen daily on our streets, is found in public places of resort, and among government employees. It is the clearly defined duty of Dr. Fitch to carry out the law of segregation. How has he done it? We find him with his two theories, that leprosy and syphilis are identical, and that leprosy in certain stages is not contagious, or is not contagious at all, as he says in his printed statements. If he confined his theories to private practice we might have less ground for noticing them. But to experiment with his theories at the risk of the whole community, and in defiance alike of medical testimony and public opinion, is an outrage. He admits that Mr. Sumner was discharged upon his recommendation. It was said that Sumner was to be isolated at a private house at Fisherman's Point. But he was not isolated at that place. He remained there a few days, and removed to a house in the heart of the city, near the Hawaiian Hotel; has been to Waikiki; is free, in fact, to go where he likes, and to associate with whom he likes. And there is the unfortunate young lady who, I believe, is a fine school teacher, who has been treated by Fitch for leprosy for more than a year. She has been allowed to carry on a large school of little children for all this time, children who have not the knowledge and discretion of adults in regard to this disease. Is not this almost like murder?"

In his charge to the jury the judge said that —

"The importance of the office held by the prosecuting witness could not be overestimated. If, by any means, these islands should become a plague spot, the effect would be more important upon the future of the nation than the withdrawal of the reciprocity treaty. If the medical man in charge of all those supposed to be afflicted with leprosy should assert and believe that leprosy is not contagious, and succeed in producing a general acquiescence in this belief, the public fears would be lulled, and persons be less likely to be careful in keeping themselves from contagion. The injury which such a course of conduct might entail is untold. And the *Saturday Press* could not sustain its character as a leader or as an exponent of public opinion, or a guardian of the welfare of the country, if it did not expose the falsity of such an opinion, — that is, if leprosy is in fact contagious. So, also, if the medical superintendent and the agent of the health, who has by law almost unlimited powers, shall by his published reports to the legislature, or by his other printed articles or spoken words, induce a general belief that leprosy and syphilis are identical, the result would be that those who are living pure and moral lives would become careless as to the exposure of themselves or their children by mere contact with lepers, believing sexual intercourse, by which syphilis is commonly taken, to be the only way in which they could take leprosy, and keeping themselves free from that. So, if Dr. Fitch should persuade people generally that leprosy is curable, people would become indifferent, and say: 'I have the means of employing a physician; it matters not if I take leprosy. I can be cured.' It has been often stated that among people where leprosy is less feared it spreads with greater rapidity than where it is more feared. Now, you have heard the testimony of all the other physicians, except Dr. Fitch, and quoting from medical authorities all over the world, that leprosy is not identical with syphilis, that it is incurable, and that it is in a certain sense contagious; and if they have proved this to your satisfaction the defendant was justified in what he said of Dr. Fitch. Dr. Fitch has said that he believes in a policy of segregation of lepers. If he allows lepers to be discharged who, by the weight of testimony, are not cured, would this be adhering to a policy of segregation?"

The jury brought in a verdict of not guilty.

MEDICAL NOTES.

— The remains of the late Dr. Samuel D. Gross were cremated at Washington, Pa. They were brought back to Philadelphia under the escort of the family and friends of the distinguished physician. The ashes weighed about seven pounds, were hermetically sealed in a tin box, and placed in the coffin in which the body was carried to Washington. On reaching Philadelphia the coffin was removed to the late residence of Dr. Gross, and subsequently the ashes were in-

closed in a marble urn about three feet high, unornamented and without inscription, and placed beside the coffin of Dr. Gross's late wife in the family vault at Woodland cemetery. Rev. Dr. Charles Currie read the Episcopal burial service at the cemetery.

— Mr. Knowsley Thornton recently removed a cystic spleen by abdominal section (median incision) at the Samaritan Hospital, London. The patient was a single girl, aged nineteen, and the tumor had been growing slowly for two years. Latterly it had increased much more rapidly, and caused much pain. The reports up to the end of the first week show that the patient was progressing quite satisfactorily. During the tying of the pedicle the patient suffered severely from shock, and for some minutes her life was in great danger; but she revived immediately, the tumor was cut away, and the drag taken off the pedicle. The specimen will be shown, and the further progress of the case reported, at the Pathological Society.

— In the recent pedestrian match in New York the strain on the bodies of the leading contestants after the first three days of the walk is described as being intense. Even allowing for possible inaccuracies in the description of the newspaper reporters, one is led to believe, in view of the record of the work done, that the picture drawn is not greatly exaggerated. Speaking of the man who won the race, one of the Brooklyn papers says: "His eyes were sluggish, bloodshot, and heavy, and encompassed by huge purple circles. His cheeks had so sunk in that the contour of the teeth could almost have been seen through them, and every movement was an illustration of acute agony. He swung his arms painfully, his head dropped on his chest, his shoulder blades stuck out sharply from his attenuated body, his legs dragged lamely one after the other, and the muscles of his neck twitched nervously with every step. He dragged himself steadfastly ahead, never turning his eyes to the right or left, until he came to the scorer's stand, when he painfully and laboriously turned his face toward the figures to see that they were correctly given." The change in the Englishman who held the second place is described as even more pronounced and pitiable.

— The medical world is represented in the little volume entitled *English as She is Spoke*, by the following new rendering of an old story, which, though it may leave something to be desired in elegance of diction, is yet admirable in its philosophy: "A physician eighty years of age had enjoyed of a health unalterable. Theirs friends did him of its compliments every day: Mister Doctor, say they to him, you are an admirable man. What you make then for you to bear you as well? I shall tell you it, gentlemen, he was answered them, and I exhort you in same time at to follow my example. I live of the product of my ordering without take any remedy who I command to my sicks."

— To the Pathological Society of London (March 18, 1884) Mr. Roger Williams showed photographs of a boy, in whom the femora were absent. No trace of the femur or patella could be found on careful examination on either side; a bony mass in the groin, and apparently articulating with the pelvis, was ascertained to be the head of the tibia somewhat altered. Mr. John Wood, discussing the case, said that about twenty years ago a man who went by the name of the man-monkey was well known in London; the femora were absent, but he was exceedingly agile, and this, combined with the fact that his hands reached to the ground, had earned him his sobriquet. He thought that one moral might be drawn from such cases, and that was how exceedingly useful one section of a limb might be; it was, he thought, an argument in favor of the operation of excision.

— The following remarkable cases of longevity in husband and wife, at Cleveland, Yorkshire, England, are given by a correspondent of the *Lancet*. James Miller died lately of senile decay. He was ninety-five years old, and was in good health until a few days before his death. He smoked to the last. He wanted his bed removed just before he died, and his wife, Mrs. Miller, who had "an advantage," as will be seen, in point of seniority, and would at the same time appear to have had considerable "force" of character, although she was ill at the same time, remarked, "Ay, he was always first and foremost all his life in everything, and now he wants to be so in death." Mrs. Miller did not long survive her husband, but died on March 17th last of senile decay. She was returned as one hundred and four years of age, and her doctor thinks she might have been living yet had she not refused taking medicine. She had no movement of the bowels for three weeks before her death, and refused the doctor's help. A short time before her husband was taken ill Mrs. Miller wanted him to go to Hinderwell, a good stiff walk. He said he was not able to go; Mrs. Miller replied, "It was nothing but idleness of him." Mrs. Miller, like her husband, was a lover of the "weed," and enjoyed a smoke up to time of her death.

NEW YORK.

— Dr. A. Randolph Mott, resident physician at the Riverside Hospital, Blackwell's Island, died May 6th, of typhus contracted two weeks previously in the discharge of his duties at that institution. He was twenty-six years old, and was born at Leesburg, Va., where his father is a prominent physician. In 1878 he was graduated from the University of Virginia and came to New York, where he obtained an appointment to the medical service of the workhouse on Blackwell's Island. From there he went to the Randall's Island Infant Hospital and Hart's Island Hospital, also under charge of the Department of Charities and Correction, and in 1881 was appointed to the Riverside Hospital, where he remained up to the time of his death; at the same time holding a position in connection with the chair of gynæcology at the New York Polyclinic. The Board of Health has passed suitable resolutions in reference to his untimely decease and the loss of his efficient services.

— A death certificate was filed last week at the bureau of records of vital statistics in Brooklyn, stating that Luke Walker had died in that city at the age of one hundred and one years. He was born in Ireland in May, 1783, and fought under Bolivar for the

independence of Venezuela in 1818. His father is said to have lived to be one hundred and one, his grandfather to be one hundred and two, and his grandmother to be one hundred and ten.

Correspondence.

LETTER FROM WASHINGTON.

WASHINGTON, *May* 10, 1884.

MR. EDITOR, — The thirty-fifth annual session of the American Medical Association has been participated in by nearly 1300 members (registered), is now over, and the vast body dispersed. The meeting was characterized by good temper, earnestness, and an amount of material for work in the Sections which it was impossible to dispose of. The general tone and character of those in attendance was of the best type, and it was a subject of general remark that the appearance of the delegates generally was that of fairly prosperous city men, although here and there were still evidences of very primitive manners, especially at some of the receptions, at one of which two gentlemen? (God save the mark!) spent a large portion of their time in the supper room with their hats on.

The meetings were held in the Congregational Church, which is in the centre of the business portion of the city, and near to the various branches of the street railroad. The church was kept constantly filled, and the acoustics were bad, that is, for some voices. Dr. Flint in reading his address as President could be heard by but very few. The place of registration was, unfortunately, in the main hall, through which every one had to pass to get at the general session, while opposite to those engaged in this duty was a man selling tickets for an excursion to Mount Vernon who kept constantly calling out, "Secure your tickets for Mount Vernon!" About four hundred availed themselves of this opportunity on the last day of the session. The janitor of the church was also busying himself by hanging up placards of "Please do not smoke in this church," and exerting his personal influence to the same effect, which was resented as an impertinence by some, quietly ignored by others, while the good-natured strolled out to the front steps with their cigars. Among the delegates there was quite a sprinkling of women, and the galleries were fairly filled with interested spectators; disgusted, however, on one occasion when the roll-call of the 1200 was ordered and proceeded with, which being so much like many of the proceedings of Congress, they left without ceremony.

The Sections were all well attended, and it spoke very well for the earnestness of the delegates to see this large attendance in a city which, especially at this time, presents so many attractions to the stranger. They also had the weather in their favor, for although it was warm the sky kept overcast, with fresh breezes. The Masonic Temple was set aside for the exhibit of drugs, books, and instruments. It was well filled and tastefully arranged. Men would walk in quietly and soberly to come out with their pockets bulging in the most significant manner, and with their arms filled with bundles. Here you got a cup of hot phosphatized cocoa; there a glass of Hoff's malt extract, in one corner the American preparation, and at the opposite end of the room the German imported article; in another place milk was digested for you after the most approved plan, and you took a glass of that. In other words, one found there a concentration of the book and drug fiends who come into your office with that little black bag, and that "hope-I-don't-intrude" air, to just leave you a little sample of their goods. Talk! Well all you could do was to stand still quietly and look hopelessly at the other end of the room until there was an end to the description, and another victim was secured. Yet the men would go there; almost all went. At the close of the exhibit Dr. D. C. Patterson, who had charge of caring for the exhibitors, was presented by them in a neat little speech with several handsome pieces of silver, and he certainly deserved it for the labor involved.

It was expected that the question of the Code might crop out at this meeting, but there was little said regarding it. The blanks signed by those registering were of the same character with those used in Cleveland last year, and if there were any protests they were not loud enough to excite comment. New York was well represented by some of her best men, L. A. Sayre, Isaac E. Taylor, J. C. Dalton, Flint, Jr., Janeway, C. L. Dana, Gouley, and a number of others, and the impression seemed to be that their new Society organizations would enable them to be independent of their erring brothers, so far as their affiliation with the Association was concerned, and that these might depart in peace. There was very little temper shown about the matter, and the idea was expressed that a large number would see the folly of their ways and come back into the fold. On the last day the committee to whom proposed changes in the Code had been referred made a verbal report, that in view of the departure of so many members it had been decided not to recommend any changes, but a committee was appointed to make such an explanatory declaration of the Code as might be deemed necessary. This was thought advisable, owing to the misrepresentations of certain provisions.

When the question regarding certain resolutions bearing upon the manner in which medical colleges were conducted, and upon medical education, was considered, for a time there bid fair to be a lively discussion, and Dr. Henry, of New York, made some forcible remarks with considerable warmth, but the discussion did not proceed very far, and was closed by the adoption of a resolution offered by Dr. Benjamin, of Maryland, urging upon all medical colleges to require a preliminary education, a three years' course, a register of attendance, and practical demonstrations of diagnostic skill.

The question upon the continuance of the journal of the Association, and the mode of conducting it, caused, as may well be imagined, considerable interest. A great deal of dissatisfaction was expressed as to its general management, which culminated in a printed circular issued by Dr. Packard, who was Secretary of the Board of Trustees, and an attempt was made to transfer the place of publication and editorial management to Washington, Philadelphia, or New York. The friends of the *Journal* as upon its present basis took the ground — and it would seem with reason — that Dr. Packard should have brought forward his objections within the body of trustees, to be discussed there rather than to go forth as his printed circular did; that while there was a desire to meet the best interests of the Association no positive, feasible plan

had been proposed, and no assurances given of any special individuals suitable to take charge of the *Journal*. Dr. Davis resigned his position as editor, but his resignation was not accepted by the trustees, and he was induced to continue the management of the *Journal* for one year longer only, so that it is hoped that by the next meeting of the Association some definite plan for his successor will be determined upon.

The report of the Board of Trustees showed that 3800 copies had been issued, and that after the payment of all possible expenses incurred, including salaries, etc., there would remain in the treasury $500, so that the Association would begin its year from July, 1884, with the whole of the income from the present meeting as a financial basis. Dr. Packard, from the Board of Trustees, read his minority report, embodying what has already been stated, and exciting considerable discussion, during which some rather amusing scenes occurred. A rather small and excitable member upon the platform jumped up to second the call for the ayes and noes, with the remark that he had done so the day before in connection with some other point, but Dr. Sayre had sat upon him and squelched him, when a ponderous member from the other side of the platform hoped Dr. Sayre would sit down again. The ayes and noes, by a vote of 191 to 74, laid the minority report upon the table.

The report of the librarian showed that the library has grown to 6000 volumes. This report should receive more consideration than has heretofore been given to it. With the publication of the *Journal*, exchanges are increasing to a marked degree, and it is time that the library should be utilized in some way. It has outgrown its quarters in the Smithsonian Institution, and if some provision is not made for its proper care it might as well be done away with. The librarian, Dr. Kleinschmidt, states that he has numerous calls for books from all over the country, and as yet has lost none by sending them by express to members.

On the last day of the session a number of resolutions were offered, among which was one by Dr. Gihon, that the Association erect a statue to Rush in Washington. There was a great deal of force in his remarks, but there was no discussion of them. Some one suggested that Simms and Gross, as national representatives of medical science in this country, should be similarly honored.

Dr. Von Klein, of Ohio, offered a resolution to abolish the opening of the sessions with prayer, as the body was composed of so many infidels, free thinkers, materialists, etc., but this was instantly laid on the table. And so, with a number of important motions and resolutions, which will of course be fully reported in your pages, the American Medical Association closed its sessions to meet next year in New Orleans, with Dr. H. F. Campbell, of Georgia, as its president.

The entertainments which took place in the evening were varied and enjoyable. The hospitals generally were not thrown open, with the exception of the Government Hospital for the Insane, upon the invitation of the superintendent, Dr. W. W. Godding, and the Columbia Hospital for women, upon the invitation of Dr. P. J. Murphy, the surgeon in charge, who prepared a lunch there for the use of the Obstetric Section each day of its meeting. Dinners and lunches at the houses of physicians were largely attended. Of the special entertainments the President's reception was the most extensive. As is the rule, there were no refreshments offered, but the whole house, up stairs and down, with the conservatory, was thronged with people, too much thronged for comfort, some ladies being overcome with the crowd and the heat. One very bad feature was the fact that the Marine Band was stationed in the hall-way and gave blast after blast through its brass instruments right into the ears of the packed and jammed crowd of visitors. The President had quite a party of people about him, supposed to be assisting him to receive, but apparently looking on with curiosity at the crowd; to step out of the ranks and into this little party for a few moments and watch the ushers leading people by was quite amusing. The new Siamese embassy was there in full court regalia.

On the second day there was a reception by the profession of Washington in a large hall, with music and dancing, and with abundant refreshments. This was very enjoyable, but it was noticed that there was a marked lack of ladies of the families of the receiving physicians. The few who were there made themselves very agreeable.

On the third day the Corcoran Art Gallery was illuminated, and the venerable W. W. Corcoran, now eighty-four years of age, received the guests with his usual affability and cordiality.

On the fourth day the Surgeon-Generals of the United States Army and United States Navy, with their respective staffs in full uniform, received at the Army Medical Museum, and the President of the Senate and Speaker of the House of Representatives received at the Capitol. There were also receptions at the private houses of Mr. Leiter, of Chicago, who occupies Mr. Blaine's house, the Commissioner of Agriculture Dr. Loring, Mr. Hildrup, and Chief Justice Waite.

Miscellany.

IMPORTATION OF RAGS FROM EGYPT.

THE Marine Hospital Service, through the Treasury Department at Washington, issues the following circular to Collectors of Customs and others whom it may concern: —

The following letter to this Department from the Secretary of State, dated April 16, 1884, is published for your information and guidance, and, until further notice, rags from infected ports will not be permitted to land except under the provisions contained therein: —

"I have the honor to say, in connection with previous correspondence in relation to the proper disinfection of rags imported into the United States from Egypt, that the Department has, upon careful and mature consideration of the subject commensurate with the interests involved, decided upon the following methods of disinfection, either of which will be satisfactory to the health authorities of New York City, New Haven, and Boston, who have been consulted in respect to the matter, namely:

"(1.) Boiling in water for two hours under a pressure of fifty pounds per square inch;

"(2.) Boiling in water for four hours without pressure; and

"(3.) Subjection to the action of confined sulphurous-acid gas for six hours, burning one and a half to two pounds of roll brimstone in each 1000 cubic feet of space, with the rags well scattered upon racks,

"An inspector has been designated, who will have immediate supervision, under the Consul-General, of the process of disinfection, will be required to give the subject his earnest personal attention, and furnish a proper certificate. This certificate will show the following facts: —

"(1.) His name;

"(2.) The name of the consignee in the United States;

"(3.) The place where the rags were disinfected; and

"(4.) The process of disinfection, which must be one of the processes hereinbefore described.

"After that the Consul-General is to authenticate the certifi-

cate given by the inspector. This process is to be observed in the case of every bale of rags, which is to be also marked "Thoroughly inspected," with the name of the inspector.

"The Consul-General at Cairo has been told that, although he should not refuse to certify invoices even when lacking the inspector's certificate, he must give notice to all shippers of rags that these goods will not be permitted to enter the United States unless accompanied by such certificate."

REPORTED MORTALITY FOR THE WEEK ENDING MAY 3, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	689	272	17.10	16.05	2.25	6.00	2.10
Philadelphia	927,995	364	114	13.44	14.56	—	3.92	2.16
Brooklyn	644,526	277	77	15.48	13.68	1.08	3.24	3.60
Chicago	632,100	234	106	20.01	8.60	4.73	4.27	1.29
Boston	423,800	167	56	12.60	16.80	2.40	5.98	1.80
Baltimore	408,520	169	67	24.60	16.80	5.40	3.00	1.80
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	105	31	20.90	20.90	1.90	—	3.80
New Orleans	234,000	149	52	15.51	8.71	2.68	1.28	.64
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	77	32	7.74	7.74	—	5.16	—
Milwaukee	142,400	—	—	—	—	—	—	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	17	5	16.66	5.88	—	5.88	5.88
Nashville	54,400	23	11	26.10	4.35	—	—	—
Charleston	52,286	41	10	17.08	24.39	12.19	—	—
Lowell	71,447	14	3	14.28	35.70	—	—	—
Worcester	69,442	15	9	26.66	18.88	13.33	6.66	6.66
Fall River	62,674	21	11	—	4.76	—	—	—
Cambridge	60,995	—	—	—	—	—	—	—
Lawrence	45,516	14	2	7.14	78.54	—	—	—
Lynn	44,895	13	3	15.38	30.76	—	15.38	—
Springfield	38,090	6	2	16.66	33.33	—	—	16.66
Somerville	31,350	6	1	—	33.33	—	—	—
Holyoke	30,515	11	7	36.36	—	18.18	—	9.09
New Bedford	30,144	12	2	—	16.66	—	—	—
Salem	29,503	9	1	—	44.44	—	—	—
Chelsea	24,347	8	2	12.50	25.00	12.50	—	—
Taunton	22,693	4	0	—	—	—	—	—
Gloucester	21,400	7	2	14.28	14.28	—	—	—
Haverhill	20,905	—	—	—	—	—	—	—
Newton	19,421	3	2	33.33	—	—	—	33.30
Brockton	18,323	3	0	—	33.33	—	—	—
Malden	15,273	4	0	—	75.00	—	—	—
Newburyport	13,947	3	0	—	—	—	—	—
Fitchburg	13,433	5	1	20.00	20.00	—	—	—
Eighty-four Massachusetts towns	482,727	66	14	7.60	19.76	—	1.52	6.08

Deaths reported 2526 (no reports from St. Louis, Buffalo, District of Columbia, Milwaukee, and Providence): under five years of age, 895; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 428, consumption 381, lung diseases 291, diphtheria and croup 100, scarlet fever 59, diarrhœal diseases 59, measles 49, typhoid fever 42, small-pox 27, malarial fevers 27, whooping-cough 26, cerebro-spinal meningitis 15, erysipelas 12, puerperal fever 12. From *measles*, New York 14, New Orleans 13, Baltimore 11, Chicago and Cincinnati four each, Brooklyn two, Philadelphia one. From *typhoid fever*, Philadelphia 16, New York and Chicago five each, Brooklyn and Baltimore four each, Cincinnati three, Boston, New Orleans, Pittsburg, Charleston, and Lawrence one each. From *small-pox*, New Orleans 21, Nashville three, Philadelphia, Boston, and Pittsburg one each. From *malarial fevers*, Brooklyn seven, New York and New Orleans six each, Baltimore four, Chicago three, Cincinnati one. From *whooping-cough*, New York 11, Chicago and Baltimore four each, Brooklyn three, New Orleans two, Philadelphia and Boston one each. From *cerebro-spinal meningitis*, New York and Chicago three each, Cincinnati and Nashville two each, Philadelphia, Boston, New Orleans, Lowell, and Fitchburg one each. From *erysipelas*, New York five, Brooklyn two, New Orleans, Nashville, Charleston, and Gloucester one each. From *puerperal fever*, Chicago four, Brooklyn three, New York, Philadelphia, Baltimore, New Orleans, and Lowell one each.

Cincinnati reports one case of small-pox; scarlet fever 53, diphtheria 25, and typhoid fever six in Boston.

In 102 cities and towns of Massachusetts, with an estimated population of 1,468,570 (estimated population of the State 1,955,104), the total death-rate for the week was 13.67 against 15.63 and 16.60 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending April 19th, the death-rate was 22.5. Deaths reported 3773: acute diseases of respiratory organs (London) 318, whooping-cough 189, measles 159, scarlet fever 88, diarrhœa 37, fever 40, diphtheria 24, small-pox (London 11, Liverpool and Newcastle two each, Wolverhampton and Sheffield one each) 17. The death-rates ranged from 13.1 in Derby to 28.7 in Bolton; Leicester 16.1; Birmingham 20.2; Birkenhead 20.7; Newcastle-on-Tyne 21; London 21.4; Sunderland 21.6; Sheffield 23.6; Liverpool 25.5; Nottingham 26.2; Leeds 28.4; Wolverhampton 28.6; Manchester 28.7. In Edinburgh 21.4; Glasgow 25.3; Dublin 28.7.

For the week ending April 19th, in the Swiss towns, there were 48 deaths from consumption, lung diseases 21, diphtheria and croup 13, typhoid fever 13, diarrhœal diseases eight, whooping-cough four, scarlet fever three, measles two, erysipelas one. The death-rates were, at Geneva 14.3; Zurich 11.8; Basle 24.8; Berne 33.3.

The meteorological record for the week ending May 3d, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date. April–May, 1884.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7. 23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11 23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 27	30 166	44	52	41	83	78	78	80	NE	E	E	8	10	4	C	C	C	—	—
Mon., 28	30.074	43	48	38	87	82	96	88	E	E	S	7	14	5	C	C	F	—	—
Tues., 29	29.951	45	52	37	93	62	69	75	W	NW	NW	8	17	18	F	O	F	—	—
Wed., 30	30.006	55	68	40	76	42	68	62	N	E	NW	17	5	5	C	C	C	—	—
Thurs., 1	30.098	46	56	42	91	87	95	84	NE	SE	S	13	15	8	F	C	F	—	—
Fri., 2	29.859	56	75	41	93	60	53	69	SE	S	W	3	9	15	O	F	C	—	—
Sat., 3	30.133	55	64	45	60	30	62	51	NW	NW	W	11	12	7	C	C	F	—	—
Mean, the Week.	30.041	49	59	40														.25	[2]

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening. [2] Too small to measure.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MAY 3, 1884, TO MAY 9, 1884.

WEBSTER, WARREN, major and surgeon. Granted leave of absence for six months from April 29, 1884, on account of sickness. Paragraph 5, S. O. 103, A. G. O., May 3, 1884.

STERNBERG, GEORGE M., major and surgeon. Now at Governor's Island, New York Harbor, ordered to repair to this city (Washington, D. C.) to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to meet on May 5, 1884, and on adjournment of the Association to return to Governor's Island. Paragraph 2, S. O. 103, A. G. O., May 3, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 10, 1884.

GRAVATT, C. W., passed assistant surgeon, detached from Naval Hospital, Chelsea, and ordered to U. S. S. Michigan.

HARMON, G. E. H., passed assistant surgeon, detached from the Michigan and granted leave of absence.

EDGAR, T. M., assistant surgeon, ordered for examination preliminary to promotion.

INSPECTOR OF MILK AND VINEGAR.

DR. B. F. DAVENPORT, having been appointed Inspector of Milk and Vinegar for the City of Boston, will be pleased to receive and report upon all samples sold in this city which may be sent in to him at the office, which during the month of May will continue at 30 Pemberton Square, but after that will be in the Old Franklin School Building, 1151 Washington Street, near the corner of Dover Street.

CORRECTION.

THE paper read before the New York County Medical Association on Scarlatina, referred to in the JOURNAL of May 8th, was by Dr. Charles A. Leale.

THE BOWDOIN MEDICAL ALUMNI ASSOCIATION will hold its first general meeting in Brunswick on the 28th of May, the day of the graduating exercises. There will be a dinner and other festivities. The residences of many of the alumni are unknown, and every graduate of the Medical School of Maine who has not received notification of this meeting is requested to send his address to the Secretary of the Association, Dr. C. D. Smith, Portland, immediately.

THE NAVY MEDICAL CORPS. — There are at present twelve vacancies in the Navy Medical Corps. A Board for the examination of candidates for admission into the Corps is now in session at Philadelphia.

SUFFOLK DISTRICT MEDICAL SOCIETY. ADJOURNED SPECIAL MEETING. — *Section for Clinical Medicine, Pathology, and Hygiene.* The adjourned special meeting for the continuation of the discussion upon Sewage Systems will be held at 19 Boylston Place, on Wednesday, May 21st, at 7.45 o'clock. Dr. Faxon, of Quincy, Prof. William R. Nichols and Prof William T. Sedgwick, of the Massachusetts Institute of Technology, Henry M. Wightman, Esq., City Engineer of Boston, Desmond Fitzgerald, C. E., Superintendent Western Division Boston Water Works, Edward S. Philbrick, C. E., Eliot C. Clarke, C. E., and others are expected to be present.

ROBERT T. EDES, M. D., *Chairman.*
ALBERT N. BLODGETT, M. D., *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — Wharton and Stillé's Medical Jurisprudence. Fourth Edition. Edited by Robert Amory, A. B., M. D., and Edward S. Wood, A. M., M. D. Vol. II. Philadelphia: Kay & Brothers. 1884.

Diphtheria, Croup, etc., or the Membranous Diseases; their Natural History, Causes, and Treatment. With a Review of the Prevailing Theories and Practice of the Medical Profession. Also a Delineation of the New Chloral Hydrate Method of treating the Same, etc. By C. B. Galentin, M. D. Cleveland, Ohio. 1884.

Sanitary Drainage of Tenement Houses. By William Paul Gerhard, C. E., New York City. (Reprint.) 1884.

Epileptic Insanity. A Paper read before the Academy of Medicine February 4, 1884. By Philip Zenner, A. M., M. D., Cincinnati, Ohio. (Reprint.)

Notes on the Opium Habit. By Asa P. Meylert, M. D. New York: G. P. Putnam's Sons. 1884.

Brain Exhaustion, with some Preliminary Considerations on Cerebral Dynamics. By J. Leonard Corning, M. D. New York: D. Appleton & Co. 1884.

Conversations between Drs. Warren and Putnam on the Subject of Medical Ethics, with an Account of the Medical Empiricisms of Europe and America. By Frank Hastings Hamilton, M. D. New York: Bermingham & Co. 1884.

Quarterly Compendium of Medical Science. Edited by D. G. Brinton, M. D., and Joseph F. Edwards, M. D. April, 1884. Fourth Series. No. 6.

The Treatment of Typhoid Fever. By George L. Peabody, M. D. (Reprint.)

Medical Diagnosis, with Special Reference to Practical Medicine. A Guide to the Knowledge and Discrimination of Diseases. By J. M. DaCosta, M. D., LL. D. Illustrated with Engravings on Wood. Sixth Edition, Revised. Philadelphia: J. B. Lippincott & Co. 1884.

Elements of Modern Chemistry. By Adolph Wurtz, Second American Edition, Translated and Edited, with the Approbation of the Author, from the Fifth French Edition, by William H. Greene, M. D. With 132 Illustrations. London and Philadelphia: J. B. Lippincott & Co. 1884.

National Board of Health. Closing Argument submitted to the Committee on Public Health.

National Board of Health. Remarks before the Committee on Public Health. By Dr. James L. Cabell.

Krankenheber. Von Stubarzt Dr. Hase in Hannover. Separat-Abduck. 1884.

Address.

EXTRACTS FROM THE ADDRESS AT THE ANNUAL MEETING OF THE PENNSYLVANIA STATE MEDICAL SOCIETY.

BY HENRY H. SMITH, A. M., M. D. U. P., PRESIDENT.

MEMBERS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA, AND LADIES AND GENTLEMEN, — The recurrence of the period when delegates from all our County Medical Societies assemble to interchange professional opinions and renew or form the fraternal ties of a distinguished brotherhood, has again brought us together on this the thirty-fifth annual session of the Medical Society of the State of Pennsylvania.

Welcomed as you have been by our Committee of Arrangements on behalf of the Philadelphia County Medical Society, honored by the presence of the Governor of the Commonwealth, and coming among those who have been the preceptors of many of you, in our well-known medical schools, you hardly need the greeting I tender you this evening, on behalf of our citizens here assembled, in recognition of your presence in Philadelphia.

Chosen to preside over your deliberations, I highly appreciate the unsought honor conferred by your choice, and have entered on the performance of the duties this honor entails with a consciousness that I am dependent on your kind assistance for the proper execution of the functions of the chair.

The By-laws of our Society make it incumbent on your President to deliver a public address, and in the performance of this duty I ask your consideration of a theme with which you are all doubtless more or less familiar, but which now and evermore must be the subject illustrated in these annual assemblies.

This theme I would formulate as —

THE IMPORTANCE AND USEFULNESS OF SCIENTIFIC MEDICAL ORGANIZATIONS TO OUR PROFESSION AND THE PUBLIC.

In order correctly to comprehend the objects obtainable by such organizations it may be useful —

(1.) To note their origin and elementary formation, as described in history.

(2.) Show in what manner our annual meetings are useful to the profession and the public.

(3.) Allude to the reciprocal obligations of the public to the profession.

A *society* has been defined as "an association of individuals voluntarily created for the promotion of knowledge, industry, or virtue, and of planning or creating orders for these purposes." It is especially constituted for the *extension* of knowledge and the general good of the community in which it exists.

The creation of societies is due to comparatively modern periods in the history of mankind, and is evidence of the progress of civilization and literary culture, Alcuin, about 781, under the patronage of the Emperor Charlemagne, being, it is said, the first who attempted to organize one.

The earliest literary society was called an academy, and derived its name from *Academus*, the original owner of the grove in the suburbs of Athens where Plato and his followers held their philosophical meetings.

Cicero also named his villa near Puzzuoli an academy, and is said to have there written his Academical Questions and his book De Natura Deorum. Subsequently the term academy signified "a society of learned men established for the improvement of art or science," as in the Royal Academy of Science in Paris, and our own Academy of Natural Sciences in Philadelphia.

A medical academy or society, designated as that of the "Naturæ Curiosi," existed at an early period in Germany; another was founded at Palermo in 1645; and another met weekly at Venice in 1701.

The Academy de Naturæ Curiosi, or the Leopoldine Academy, was founded by Bauschius, a physician, in 1652. He extended an invitation to all physicians to communicate their extraordinary cases, which, in 1684, were published as a volume of observations under the title of Ephemerides, a title in existence in a journal of the present day.

The most enlarged idea of a literary and scientific society is, however, believed to have originated with Sir Francis Bacon, in England, "who recommended to James the First the institution of societies of learned men, who should give to the public from time to time a regular account of their researches and discoveries, and thus unite the *world* into one great republic of letters, which, though consisting of many detached states, should yet hold a strict union, and preserve a mutual relation to each other in everything that regarded the common interest." In his New Atlanta he delineated a philosophical society which Cowley is said to have presented to Charles the Second of England for the charter of the Royal Society of London, and it may interest some to know that Dr. William Harvey, the discoverer of the circulation of the blood, was, in 1628, physician to Lord Chancellor Francis Bacon,[1] and doubtless participated in the planning of this society.

History has thus demonstrated the utility of such organizations, and that many improvements of a public character have been due to the united labor and intelligence of men interested in one grand pursuit.

The charter of the Royal Society of London was granted in 1662, that of Christian Knowledge in 1698, and that of the British Medical Association in 1832.

The New Jersey Medical Society appears to have been the first medical society organized in this country, it being regularly constituted by the voluntary association of a number of the Practitioners of Physic and Surgery of East New Jersey, at New Brunswick, on July 23, 1766, "for their mutual improvement, the advancement of the profession, and the promotion of the public good." [2]

The American Academy of Sciences was established in 1780, by the Council and House of Representatives of Massachusetts, "for encouraging medical and philosophical discoveries, and whatever tended to advance the interests, honor, and dignity of a free, independent, and virtuous people." [3]

The organization in 1847 of the American Medical Association, of which our State Society is an integral portion, is precisely that which Lord Bacon esteemed so advantageous to the general welfare, it being, in fact, a great republic of medicine in which individual State societies are united in a common interest, namely, the preventing, curing, or alleviating the "ills that flesh is heir to."

In the association of individuals that thus formed

[1] Encyclopedia Britannica, etc.
[2] Narrative of the Rise and Establishment of the New Jersey Medical Society. Transactions from 1766 to 1859.
[3] Dobson's Encyclopedia.

societies it soon became apparent that some laws or rules of action applicable to each and every member must be adopted, in order to regulate intercourse and restrict irregular or individual opposition to the interests of the Society, and that in these laws, as in those of all communities, the most important portion would be "the penal or vindicatory clause," it being useless to say, do this or avoid that, unless the law also declared what would be the penalty or consequence of non-compliance. Ethics, or the law of manners, collected in a paper-book, termed Codex or Code, was thus adopted at an early period in the history of all societies, and the Code of Ethics of the American Medical Association is but another illustration "that history repeats itself."

In this Code the vindicatory or penal clause is found in the By-laws, and as the Code is accepted by each society, it is applicable to every one who is elected to membership in a State or County society. In the ninth by-law of the American Medical Association the rule explicitly states that "no State, local society, or other organized institution shall be entitled to representation in the Association that has not adopted this Code of Ethics, or that has intentionally violated or disregarded any article or clause of the same." [1] Consequently, the penalty of violation is exclusion and loss of membership, which also implies non-intercourse professionally with other members.

The origin of our own State Society dates back only to the year 1848, when the preëxisting county societies of Chester, Philadelphia, and Lancaster elected delegates to a Medical State Convention that assembled in the city of Lancaster to take the necessary steps to create a State Society such as was required to form a part of the American Medical Association. With this object the Philadelphia County Medical Society, on February 5, 1848, elected as delegates to the Convention, Drs. Emerson, John Bell, B. H. Coates, George W. Norris, Henry H. Smith, Rutter, Shallcross, Henry Bond, J. Rodman Paul, and Isaac Parrish, [2] of whom the speaker alone remains an active member of this Society.

The proposition for the meeting of the Convention originated with the Chester County Medical Society; whilst the Lancaster County Society tendered the first invitation for its assembling in Lancaster. At this meeting, on April 11, 1848, in the Methodist Church of that city, the daily newspaper, called *The Lancaster County Farmer*, greatly aided the objects of the meeting by reporting its proceedings. The delegates to the Convention from the Lancaster County Society were: Drs. J. L. Atlee, Humes, Kerfoot, Duffield, Clarkson, and Emerson; and of these, our venerable fellow-member, Dr. Atlee, yet continues his active interest in our Society, the formation of which he greatly promoted by his professional influence, whilst illustrating the pleasures arising from the social intercourse of its members by a handsome evening entertainment at his own residence.

In its progressive development this Society, like all others, adopted as an integral portion of its constitution the Code of Ethics published by the American Medical Association, and again acknowledges its high estimate of the "old Code," and the incalculable benefits it has bestowed on the profession and the public.

[1] Article IX., Section II., By-Laws of American Medical Association.

[2] Philadelphia Medical Examiner, 1848.

This Code, now so widely recognized as an exponent of many professional obligations, was reported by the late Dr. Isaac Hays [3] (on behalf of a committee) to the National Convention that formed the Association, and was composed chiefly from a great number of Codes of the preëxisting county and State societies in the United States, as well as from the Code of Institutes and Precepts, prepared by Dr. Thomas Percival, of Manchester, England, that was published in 1803. The adoption, by the Association, of a series of rules for professional conduct that thus had the approval of the most eminent physicians of that period, and some of the sections of which were in the words of our distinguished citizen, Dr. Benjamin Rush, [4] may be cited as among the first fruits of the organization of the medical profession in the United States, and illustrates, as Lord Bacon suggested, "the good derivable from an association of kindred spirits in the formation of a society," as well as the truth of our national motto, "that in union there is strength."

At a period when rebellion to the regularly constituted authority of the profession, as organized in this country, is attracting even the attention of the daily press, it cannot be useless to recall the history and provisions of this Code, and to remind those who are now objecting to its beneficent laws, and endeavoring to substitute their individual sentiments for those of the profession regularly assembled and organized for the creation of an association in which they openly united, that they are risking the severance of professional connections that calmer consideration may hereafter cause them deeply to regret. If the progress of time and the wishes of a majority of the profession demand a modification of this Code, it should be accomplished in and by the Association that originated it, and not by any county or State organization that with extraordinary selfishness ignores the sentiments of their brethren in other States.

A question that has been warmly discussed in connection with this Code is the right of members of the American Medical Association or a county society to consult at the bedside or office in regard to the diagnosis and treatment of disease with those who practice and believe in an exclusive dogma, and especially that one revived by Hahnemann, of *similia similibus curantur*, or that "like cures like."

It matters little, in the consideration of this question, to ask how or why it arose. The propriety of such consultations is positively settled by the Code, and hence its repeal is advocated by that comparatively small number, especially in New York, who perhaps anticipate benefit from the change. Any one who reads the clause in reference to consultations will readily see that the Code recognizes the fact that two physicians, of different medical creeds, cannot agree on any question of pathology and therapeutics, when each is conscientious in the correctness of his own professional opinion. . . .

UTILITY OF THESE ANNUAL MEETINGS TO THE PROFESSION AND THE PUBLIC.

The influence exercised by these annual meetings of our Society is, however, by no means limited to medical ethics, but extends to the entire community, through the scientific work thus accomplished.

In reviewing all that this Society has done in the

[3] Prefatory Note to original Code, printed in 1848.

[4] Ibid.

last thirty-five years our increased knowledge of the best means of preventing or alleviating disease is very apparent.

No post-graduate course of medical instruction, now so much in vogue, "with doctrines fashioned to the varying hour"[1] offers more valuable information to a medical man than that afforded by the papers and discussions presented in our sessions. The great difficulty at present is to condense the large amount of valuable material annually presented, and he who would not be left behind in the improvements of his profession cannot safely neglect attendance on these meetings or fail to read our printed Transactions.

Since 1848 many advances in pathology as well as in practice have been made in this body and been subsequently developed for the public good.

In the annual addresses of the chairmen of the Sections on The Practice of Medicine, Surgery, Obstetrics, and Hygiene, how much valuable information has been laboriously gathered by their respective authors, tested by their ripe experience, and freely offered to the profession and the public in the most attractive and scholarly manner, presenting facts not readily obtainable by those educated sons of toil, the hard-worked, badly paid, and ever-busy country practitioners, as well as by their more favored brethren in our cities, whose constant occupations leave but a brief hour to read up the improvements presented each day by a prolific press.

In the annual reports made by the able chairman of the Section on Hygiene, and especially by him who has also for years faithfully served the Society in the care of its funds, how many suggestions have tended to secure the comfort and sanitary safety of many of the towns and villages of this great Commonwealth.

In 1875, in inaugurating these reports on Hygiene, the chairman[2] aptly described "the absolute necessity of corporeal sanity to the existence of mental sanity," recognizing the great truth that the preservation of health implies the prevention of disease, and illustrating the ancient proverb, "mens sana in corpore sano," as well as the wisdom of Hippocrates, who nearly twenty-five hundred years before him first enunciated the principles of public hygiene in his treatise Περι αερος, υδατων και τωπων, — air, water, and localities, — principles yet carefully studied by our profession for the especial benefit of every community, thus realizing the truth of the anecdote of the Scotch doctor, who, being called on at a supper for a toast, gave "The health of this company, though very much agin my interest."

How much of the attention now given by laymen to the purity of the water they drink, the vitiation of the air they breathe, the importance of proper drainage, and the removal of excreta are due to the assembling of our various medical societies. . . .

From the annual meetings of our Society have also arisen many legal acts relating to the protection and preservation of some of the most valuable interests of the community, — acts, it is true, only gained from our Legislature by persistent efforts. In the Act for the Registration of Births, Marriages, and Deaths, now in general use in Philadelphia, how valuable a record is secured in tracing relationship or recovering property for otherwise unknown heirs.

The law requiring every physician to be registered by the prothonotary of his county, and the exhibition of his diploma before he can be allowed to practice medicine or issue a single prescription, has worked much good to the community, but it yet requires increased power. In those States that can enforce a thorough law it has driven away many of the harpies that, under the pretense of curing disease, preyed upon the credulous.

(To be concluded.)

[1] Goldsmith.

[2] Dr. Benjamin Lee, of Philadelphia.

Original Articles.

THREE CASES OF HOMONYMOUS HEMIANOPIA.[3]

BY O. F. WADSWORTH, M. D.

THE cases which I have to report are of interest from the fact that, while in all the occurrence of hemianopia was sudden, in two this was attended, or followed, by only very slight other symptoms of cerebral disturbance, which in one, if not both, were quite temporary, and in the third there was no other symptom whatever. Hemianopia, as an accompaniment of other disorders of cerebral origin, — hemiplegia, hemianæsthesia, aphasia — is, as is well known, not uncommon, probably in a certain number of cases it is present without being recognized. But as an isolated symptom, appearing suddenly, without paresis or disturbance of sensation, it may be regarded as infrequent. I have found only some half dozen such cases reported, in a somewhat carefal examination of the literature of the subject. Most of these cases are, like my own, incomplete, — there was no autopsy. Two, in which there was an autopsy, are of special importance in connection with the localization of the lesion causing the hemianopia.

Mr. N., aged sixty, was seen in consultation December 30, 1881. He was a large, fleshy man, smoked to excess, but was in other respects temperate, though perhaps a large eater. He was subject to dyspepsia. For ten or fifteen years he had had occasional slight, momentary attacks of vertigo. He had for a long time occasionally waked suddenly from sleep with a feeling as of stoppage of breath, over so soon as fairly awake. Three weeks and a half before I saw him, on going to bed at night, he suddenly remarked to his wife that she had turned out the gas, it being still lighted. He was much excited by this, and his wife and daughter were up with him for perhaps two hours calming him, but I did not learn positively whether the loss of sight had continued so long or only his excitement. The following day, at least, there was no complaint of disturbance of sight, but for the next few days there was a tendency to coldness of hands and feet. Four days after this attack he rose from his chair, poured out and drank off a full glass of ice-water, became immediately much congested in the face, had some vertigo, and complained of blur of vision. Since then he had been confined to his room, most of the time to bed; his pulse had been intermittent at times, and there had been a murmur following the first sound of the heart, but he had improved with the administration of digitalis, and when I saw him the pulse was regular and strong. His memory, his physician thought, was a little affected; he would ask the same question sev-

[3] Read before the Boston Society for Medical Improvement, May 12, 1884.

eral times in the course of the visit; the daughter said she had noticed something of this tendency to repeat questions during all the past autumn; I did not observe it. It may have been in part nervousness; he had been very nervous about himself, and I was introduced as if my visit was unpremeditated, and was asked not to question him closely to avoid exciting him. He had complained from the time of the attack of a sort of blur before his eyes, "as when one looks at the light and then away;" he told me his "vision was not quick;" said, pointing to the door, which was a little to his left as he lay, "I would walk against that door if I tried to go out of it." His vision seemed good, however; he could tell time by the clock on the mantel, some fifteen feet off, and he could read, though "something troubled him in reading." The eyes were externally normal. The retinal veins looked rather dark (the superficial veins of the hands were also dark), but there was nothing else to be seen in the fundus of either eye to suggest any pathological condition. The patient sat or lay with his right side toward the edge of the bed, the other side of the bed being near the wall of the room, so that nearly the whole room was either directly in front of him or to his right side. Nothing had occurred to suggest to me hemianopia, and it was as a matter of routine that I tested his field of vision. The examination was made roughly with the moving hand, and hurriedly, so as to avoid causing alarm. The left half of each field was wanting, the right half apparently unaffected. My diagnosis was probable cerebral embolism.

I have not again seen Mr. N., but have recently heard indirectly that he gave up his business and moved into the country, that he has become rather cross and peevish, but in other respects is in fair health. His hemianopia has continued.

Mr. A., aged fifty-nine, has been for thirty years yard-master at the terminus of one of the railroads leading out of Boston. Eighteen years ago he was struck on the back of his head by a moving car, and was unconscious for three or four hours. At that time he was kept from his work for three weeks, but afterwards was as well as ever. He had had no other serious disturbance of health. He is a large man, of florid complexion, averaging two hundred and twenty-five pounds in weight. In July, 1883, after his usual exposure to the sun on a very hot day, he came home at noon with flushed face, and complaining of dizziness and headache, eat no dinner, but went back to the yard and attended to his customary work in the afternoon. When he reached home at night he told his wife that on the way he had run into people on the left side because he did not see them. His headache was worse, his face flushed, his pulse rapid and full. All uncomfortable feelings were relieved by a saline cathartic, bromide of potassium, and rest, but the defect of vision persisted. He was away from work only two days at this time, but a few weeks later took a vacation of a month. With this exception he had attended to his regular duties and been in his usual good health till I saw him, on March 19, 1884.

The eyes were externally normal, the pupils reacting well. Vision of either eye, with $+48$, $\frac{1}{\infty}$—$\frac{1}{\infty}$. There was complete loss of vision on the left side of the field in both eyes; on the right side no contraction of the field could be made out. The boundary of the defect was sharply defined, practically vertical through the fixation point, but with a slight curving out round the point of fixation toward the side of the defect. When he fixed a black dot on white paper at 16″, the black point of a pencil, approached from the left in the horizontal meridian, was seen only when it had arrived within a quarter or three eighths of an inch of the dot; from a little above or below the horizontal meridian the pencil was seen only when it reached the vertical meridian.

Placed 9′ from the blackboard, a white object was seen with the left eye about two inches to the left of the fixation point in the horizontal meridian; with the right eye in the same meridian at 3″ to 4″ to the left; above and below the line ran along the vertical meridian for the right eye; for the left eye coincided with the vertical meridian below, but above inclined very slightly toward the left. The media were clear; the disks a trifle grayish in both eyes, but not beyond the physiological limit for his age; the fundus generally quite normal in appearance.

Mrs. M., aged fifty-four, applied to me April 12, 1884, with complaint of loss of sight of the left eye, as she expressed it, which had occurred suddenly on February 23d, seven weeks before. For sixteen years she had been subject to attacks of sciatica, chiefly on the left side, at intervals varying from two or three weeks to three or four months, the pain situated in toe, heel, leg, or thigh, lasting from a day or two to two or three weeks, and at times severe enough to require subcutaneous injections of morphia two or three times daily. Her daughter, who came with her, spoke of slight hæmorrhage from the lungs on two occasions some years ago, but Dr. Hanscom who had attended the family the past eight years, writes me he had never heard of any such hæmorrhage, that he had looked upon her as a woman of rather delicate health, but always about the house and at work. He had attended her through a mild attack of pneumonia several years ago, and had been called to see her several times when suffering from sciatica. Some eleven weeks before I saw her she had an attack of severe sciatic pain in the left leg, with some tenderness in the knees, and considerable fever. She had morphia subcutaneously for the pain, and for two or three days a small amount of salicylate of soda, but as this last remedy disturbed her stomach, quinine, two grains four times daily, was substituted for it. At this time there was complaint of pain in the head near the temples, and of noises in head and ears, as of machinery. Both these symptoms ceased after a few days, though the quinine was continued some time longer. A day or two after relief of the sciatica, and a week from its beginning, pneumonia developed at the base of the left lung. She got on very well with this, and there was nothing specially noticeable in the course of the sickness except that convalescence was retarded by great and continued prostration. Improvement had been manifest for some time, however, when the defect of vision set in.

On the morning of February 23d she was lying in bed, having been awake perhaps an hour. The nurse gave her her medicine (syr. hypophos. co.), and went down-stairs to bring her breakfast. "Before the nurse could have got down-stairs" sight was completely gone on the left side, without any other sensation whatever, except a faint glimmering, which seemed to be chiefly or wholly on the left side. By April 12th her general health had improved, but the condition of the eyes had not changed, unless it were that the glimmering had been a little more pronounced the last three or four days.

The eyes were externally normal. Vision, R., with $+30, = \frac{1}{3}$; L., with $+24, = \frac{1}{4}$. The fundus was quite normal in both eyes. The left half of the field of vision was wanting for both eyes. The limit between the seeing and non-seeing halves was sharply defined. Measured on the blackboard at a distance of 14″ the dividing line ran an inch to an inch and a half to the left of the point of fixation, above and below it ran vertically and a very little to the left of the vertical meridian. The outer boundary of the right side of the field in each eye was normal.

At the present time it may be assumed that a partial decussation of the optic nerve fibres at the chiasma is accepted with practical unanimity, at least by ophthalmologists, and that the production of homonymous hemianopia (the only pure form, that is, in which there is stationary defect of the whole of corresponding halves of each visual field) must be ascribed to an injury farther back than the chiasma.

Two principal views have been held as to the course of the tractus fibres backward. According to the one view, of which there have been some variations, the scheme proposed by Charcot being probably the best known, a second partial decussation takes place at some point after the tractus has reached the brain. In Charcot's scheme the fibres which come from the outer part of the retina, and which do not cross at the chiasma, do cross to the opposite hemisphere after they have reached the cerebral ganglia, so that eventually all the fibres supplying the retina of each eye are connected with the hemisphere of the opposite side. If this scheme be correct homonymous hemianopia can be caused by a single lesion only if it involves the tractus between the chiasma and the point where the second decussation occurs. The scheme was originated to account for amblyopia of one eye from affection (hysterical) of the opposite hemisphere without abandoning partial decussation at the chiasma. Since it has been demonstrated, however, that in these cases there is not unilateral amblyopia, but that both eyes are affected, though in unequal degree, Charcot is said to have abandoned his scheme, at least to have indorsed an essay of his pupil, Féré, in which the latter proposed to give up the supposition of a second partial decussation. But aside from this there is now ample evidence against the accuracy of Charcot's view.

According to the other and most generally received opinion all the fibres of each tractus which are concerned in vision pass backward to the cortex of the hemisphere of the same side. In favor of this course of the fibres there appears to be convincing testimony.

Let me sketch very briefly the path the fibres follow on their way from the chiasma to the cortex. The tracts diverge from the chiasma, pass outward and backward beneath the crura cerebri, and curve upward around these. The main body of the fibres of each tractus then passes around and through the corpus geniculatum externum into and over the surface of the posterior part of the optic thalamus, and from the latter fibres pass on to the anterior corpus quadrigeminum. From these three ganglia, again, fibres run backward to the cortex of the occipital lobe. The inner portion of the tractus separates from the rest before reaching the corpus geniculatum externum, and most of it may be traced into the corpus geniculatum internum and posterior corpus quadrigeminum. Still another, innermost, fasciculus of the tractus enters the crus cerebri and goes, as Stilling states, to the ganglion of Luys, situated in the crus. According to Wernicke, who is supported by the results of Gudden's experiments on animals, these inner portions of the tractus have no anatomical or physiological connection with the eye; they do not pass into the optic nerves.

The evidence that the cortical centre of vision is in the occipital lobe is such as can scarcely be doubted, and is of various kinds. First, from the result of experiments on animals, especially the careful and repeated experiments by Munk on dogs and monkeys, in which the effect on vision produced by removing portions of the occipital lobe on one or both sides was studied. And although it may never be justifiable to draw from animals absolute deductions as to the conditions existing in man, such investigations are of great value when considered in connection with the data given by pathological examination. Among the evidence furnished by pathological anatomy are two cases reported by Huguenin.[1] The one was a man, fifty-three years of age, who had been blind of the left eye since his fifth year, and died of pneumonia. At the autopsy there was found circumscribed atrophy of the cortex in the posterior median part of the occipital lobe on either side, — much greater on the right, in agreement with the fact that the number of fibres that cross at the chiasma is greater than that of the non-crossing fibres. The other was a woman of forty-three years, nearly blind of both eyes from early childhood, and dying of typhoid. Here, too, there was atrophy of corresponding parts of both occipital lobes. Finally, there are now a number of cases recorded in which there was hemianopia, and in some of which the only lesion, in others the only lesion that could have caused hemianopia, was situated in the occipital lobe.

It is clear that homonymous hemianopia may be produced by an interruption in the course of the nerve fibres anywhere from the chiasma to the cortex. The question arises whether it may be possible to localize the interruption. For this purpose the path of the fibres may be divided into four districts: the first embracing the tractus from the chiasma to the central ganglia; the second the central ganglia, optic thalamus, corpus geniculatum externum, and anterior corpus quadrigeminum; the third the region extending from the central ganglia through the posterior part of the internal capsule; while the fourth extends from the point where the visual fibres separate themselves from all others to the cortex of the occipital lobe.

When, in addition to hemianopia, there are disturbances of sensation or of motion, or of both, the problem is a complicated one. There may be multiple lesions, or, if only one, a part of the disorders may be merely indirect consequences of it. The question is simpler if the hemianopia is the one important loss of function, when, as in the cases above reported, the onset of hemianopia is sudden, and there are no other symptoms, or at most only such as are temporary and of small moment. It is this simpler question alone that I propose to discuss.

Theoretically it would seem as if a lesion to produce such a result must almost necessarily be in the course of the optic tract, and, indeed, within the tractus itself. It can hardly be conceived that a hæmorrhage outside the tractus of sufficient amount to wholly cut off conduction by pressure could fail to excite also other grave symptoms of cerebral disturbance. Hæmorrhage,

[1] Centralblatt für pract. Augenheilkunde, 1878, page 311. Corresp. f. schweiz. Aerzte, 1878, No. 22.

embolism, or thrombosis within the tract might produce complete hemianopia and nothing else, yet, so far as I have been able to learn, there is record of no autopsy to show this has ever taken place. Its possibility, of course, cannot be denied. Partial destruction of the tract by embolism or thrombosis has been observed. Marchand [1] reports a case in which, three days before death, and when the patient was in a condition that must have prevented anything like accurate examination, right-sided hemianopia was said to have been observed. Here, besides other lesions, among the rest thrombosis of the left internal carotid, there was an area of softening in the left tractus due to embolism or thrombosis. The softening involved but about one third of the thickness of the tractus, however, and certainly could not, as Marchand states, have entirely interrupted its function. The hemianopia must, therefore, have been incomplete. Doubtless injuries within the tractus have been sometimes overlooked, and many cases never come to autopsy. Cases of sudden blindness of one eye have been supposed, with some likelihood, to be caused by hæmorrhage into the optic nerve, and the same thing might take place in the tractus, yet there is an anatomical difference in the circulation of the two parts of some significance in this respect. An artery and a vein of relatively considerable size, the central vessels of the retina, run for some distance within the optic nerve. The tractus, on the other hand, like the greater portion of the nerve, is supplied only by quite small vessels. The fact remains that positive evidence in this direction has not yet been presented.

So far as the central ganglia are concerned, their anatomical relations make it at the least extremely unlikely that a lesion could occur there of sufficient amount to produce complete hemianopia without, at the same time, impairing motility and sensation, one or both. The posterior portion of the optic thalamus, the pulvinar, is probably the most important of these ganglia for the function of vision. From Flechsig's investigations it appears that the thalamus is connected with all parts of the cortex by fibres which pass outward in all directions from its external surface, and make up in large degree the corona radiata. The most accurate pathological evidence as to the effect of localized disease in this situation is furnished by a case reported by Hughlings Jackson,[2] the autopsy by Gowers.

A man, aged sixty-five, in November, 1871, felt sick, vomited, attempted to go up-stairs, fell, and became unconscious. He was "unconscious" for two weeks, and for six weeks too ill to be left night or day. In March, 1873, there was a trifling drawing of the face to the right. He could execute all large movements of the upper limb, but they were all imperfect, feeble, and slow. The leg was more paralyzed than the arm; he could walk, however, a great distance. There was great diminution of sensation of the left side of the face, trunk, and limbs. There was left hemianopia. This defect of vision he found out when he recovered consciousness. In 1874 his condition was practically the same. In the early part of this year he had what was probably a slight paralytic attack, but no clear account of it was obtainable. It left no obvious permanent effects. Some time later the man died after a few days' illness, which, from his friends' account, presented no further definite local symptoms of nervous origin. Examination of the brain revealed but one lesion.

"The right optic thalamus presented a considerable depression over its posterior half, where it was much softer than that of the opposite side. On section the tissue was seen to be softened, grayish-yellow in tint. The amount of softening was greatest on the inner side, the posterior tubercle (pulvinar) being broken down and destroyed, and here the softening extended up to the ventricular surface. It did not extend beyond the limits of the thalamus into the white substance of the hemisphere or the crus, and the anterior half of the thalamus and posterior extremity of the corpus striatum were intact. The microscopic characters were those of simple softening. The vessels at the base of the brain were moderately atheromatous; no occluded vessels near the softened area could be discovered. Convolutions healthy. No disease elsewhere."

On the other hand, in a case reported by Baumgarten, in which there was a small cicatrix near the centre of the optic thalamus, no mention is made of motor or sensory affection. Baumgarten's personal knowledge of the case, however, was limited to the condition after death; the history is given with extreme brevity, and the publication was made to show the connection between the hemianopia which had existed and another and more extensive lesion. It is more than likely, therefore, that motor or sensory defect was present at some time, but was omitted in the relation. A detailed account was promised in *Graefe's Archiv.* It has not been given there. This case will be referred to again later.

The fibres going from the central ganglia concerned in vision to the cortex are, in their path through the internal capsule, closely associated with fibres connected with other functions. It must be assumed, then, that a sudden lesion in this position which produced total hemianopia would give rise to other disturbances of function also — hemianæsthesia and hemiplegia.

But recently has attention been strongly directed to the occipital lobe as the seat of the injury in hemianopia, yet there are, as has been said already, several cases in which it has been demonstrated that the defect of vision was caused by a lesion in that locality. In most of these, as was naturally to be expected, this was not the only symptom pointing to a localized disorder. A destruction of the lobe of sufficient extent to excite abruptly complete hemianopia cannot always be strictly limited, and in some instances the other disturbances were doubtless merely its indirect results. There is, however, one case (Curschmann's [3]) where the patient was under observation at the time hemianopia appeared, and until his death not long afterward, in which this was the only symptom of local, the one important symptom of any, cerebral disease.

A man of fifty years, previously quite healthy, was brought to the hospital three days after swallowing by mistake sulphuric acid. He presented the usual symptoms of sulphuric acid corrosion, and, as he could not swallow, was nourished by enemata. The circulatory apparatus appeared normal. A week after admission embolism of the right brachial artery occurred. The morning of the next day the patient complained that he could see nothing in the left side of the visual field. Examination discovered that the left half of the field

[1] Archiv für Ophthalmologie, xxviii., 2.
[2] Lancet, August 29, 1874, and May 22, 1875.
[3] Centralblatt für Augenheilkunde, 1879, page 181.

in each eye was wholly wanting, while central vision, eccentric vision in the right half of each field, and the fundus of both eyes were wholly intact. The hemianopia continued unchanged till death. No other symptoms of a localized disease in the brain appeared neither hemiparesis nor disturbance of sensibility; there was only slight delirium, which had not been present before the hemianopia was observed. After lingering in a very miserable condition, with difficulty in swallowing and vomiting of blood, the patient died of inanition sixteen days after the onset of the hemianopia.

The autopsy showed the ordinary changes in the intestinal tract; inflammation of the intima of the aorta propagated from the œsophagus; a firm embolus of the right brachial artery; finally, in the brain, — while cerebellum, tractus opticorum, fundus of the eyes appeared normal, — a large patch of softening in the right occipital lobe, which extended to the surface and was situated mainly at the median side and apex of the lobe.

Here the slight delirium, of later date than the embolism, and most naturally to be regarded as a result of it, might well have been a consequence of the general condition of the patient, who was practically starving.

Baumgarten's case,[1] previously alluded to, is not so clean as the preceding one.

A strong healthy man, having made a long, cold journey, noticed the next morning on rising a great disturbance of sight. This proved to be a complete left hemianopia, the boundary line of the defect in both eyes sharp and passing vertically through the fixation point. V = 1, and perfect color sense. The visual defect persisted unchanged till death, which occurred after some months from failure of heart. In the course of the disease symptoms of severe heart and kidney affection appeared. The one important lesion was an old so-called apoplectic cyst in the substance of the right occipital lobe. This was of the size of a walnut, its lower wall separated from the cavity of the right posterior cornu by a layer of intact white substance several millimetres thick, its upper wall formed mainly of the windings of all three occipital convolutions, which had wholly undergone yellow softening, but whose configuration was still recognizable. There was also a spot of red softening, the size of a pea, in the roof of the left anterior cornu, and a small so-called apoplectic cicatrix, half the size of a lentil, near the centre of the right optic thalamus. Optic nerves and tracts, crura cerebri, corpora geniculata externa and interna on both sides, chiasma and corpora quadrigemina were normal macroscopically and microscopically.

In Haab's case [2] a woman, aged sixty-one, had endo- and pericarditis. This was soon followed by temporary paresis of the left extremities and a left-sided hemianopia which persisted till death, about a year later, from mitral insufficiency. The apex of the right occipital lobe was found somewhat shrunken, the pia passing loosely over a collection of clear serous fluid. Examination showed softening and destruction of a pretty large district of the cortex, involving the whole neighborhood of the sulcus hippocampi over a space of several square centimetres. The anterior end of the defect was six centimetres from the apex of the occipital lobe.

Vertically the degeneration measured two to three centimetres. The sulcus hippocampi together with the bordering gyri were destroyed. The destruction was confined chiefly to the cortex, so that between the cystic softening and the posterior cornu there was a fairly thick layer of white substance. No other pathological change in the whole brain. Region of thalamus, corpora quadrigemina, corpus geniculatum externum, and tractus on both sides completely intact. There was no other lesion to account for the paresis which was present for a short time after the embolism, so that it is to be assumed there was disturbance of the circulation in croscope discovered no atrophy of optici, chiasma, or the motor region of the right hemisphere. The mitractus.

Other cases might be cited; these are perhaps the most striking.

From the absence of demonstration of a sufficient lesion within the tractus, and the evidence offered by such cases as have been quoted, it may not unjustifiably be assumed that when homonymous hemianopia occurs as an isolated defect the seat of the injury is to be found in the occipital lobe.

[1] Centralblatt f. d. Med. Wissenschaften, 1878, No. 21.
[2] Monatsblätter für Augenheilkunde, 1882.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.[3]

BY WILLIAM F. WHITNEY, M. D.

CONTRIBUTIONS TO THE PATHOLOGICAL ANATOMY AND HISTOLOGY OF BERI-BERI.

Scheube [4] has had opportunity to make autopsies in twenty cases of this disease, which is endemic in Japan, Batavia, and Java. In all cases the nerves showed more or less degeneration and atrophy, the degree of this corresponding with the paralysis observed during life. The fresh nerves were hardened in osmic acid, and the microscopic examination of these specimens showed that the medullary sheath was swollen and destroyed by its division into larger and smaller drops. Fatty degenerated cells appeared, which, with the axis cylinders, were finally absorbed leaving simply the empty and collapsed sheath of Schwann. On cross section of the hardened nerves there was seen a more or less marked increase in the fibres, which varied considerably in their thickness, and between which lay groups of degenerated ones. This was shown by the coloration with carmine, which did not permit any distinction between medullary sheath and axis cylinder to be made out, as is seen in normal cases. The number of nuclei of the endoneurium was increased, and there were inflammatory changes about the vessels in the midst of the bundles. In chronic cases there was an increase of the connective tissue trabeculæ within the nerve trunks.

The branches supplying the muscles were the most changed, although some purely sensitive nerves were also affected.

Degeneration of the muscles goes hand in hand with that of the nerves. This is an atrophy and fatty destruction of the fibres with an increase of the nuclei. Frequently it appears as a colloid-like metamorphosis. The fibres become thinned, homogeneous, and have a tendency to break up into fibrilles. In place of the fibres which are destroyed appear newly-formed nuclei and later connective tissue. Thickening of the vascular walls is also present. The final result is a cirrhosis of the muscles similar to that of the nerves The atrophied muscles are marked by their pallor and yellow color.

[3] Concluded from page 253.
[4] Virchow's Archiv, vol. xcv., p. 146.

The spinal cord gave evidence of venous hyperæmia of the meninges with a serous effusion into the peridural and subarachnoidal spaces. It has been usual to regard the cord itself as affected in this disease, but the fact that the intensity of the symptoms noted during life and the amount of softening found after death stand in no direct relations causes the author to regard this as a post-mortem phenomenon due to the hot climate.

In six cases the entire cord was examined. In two there were great numbers of small corpora amylacea throughout the whole extent, but without any other observable change. In another case there was an atrophy and partial disappearance of the ganglion cells of the anterior cornua, but this is regarded rather as secondary. In the other cases the appearance was perfectly normal.

In three cases the nerve roots going from the lumbar region were examined and found normal. In a fourth case, where the process, in the peripheral nerves and muscles was most pronounced, these roots as well as the ganglia belonging to them were infiltrated with nuclei.

From the above observations there is no doubt that there is a multiple neuritis, and the author proposes the name of neuritis multiplex endemica for the disease.

The nerves of the heart were examined, and slight changes detected in them; single fibres in which the medullary sheath had separated into balls. The same was also noticed twice in the branches of the vagus, and once in the recurrent laryngeal and pulmonary nerves. Had the changes in the pneumogastric been as extreme as in the peripheral nerve fibres, there is no doubt but that death must have occurred much earlier in the course of the disease than is usually the case.

In acutely fatal cases there is a sudden distention of the lungs, with an increase of the subjective symptoms. The area of the heart's dullness becomes less, and finally disappears, while the lower boundaries of the lungs extend further backwards accompanied by tympanitic resonance. At the autopsy there was more or less extensive emphysema, especially of the anterior edge and apex. This is thought to stand in some relation to the lesion of the pulmonary nerves already described.

The ordinary condition of the brain was that of venous hyperæmia of the meninges and of the substance of the organ, with œdema of the pia mater. With an increase of the ventricular fluid there was associated œdema of the cerebrum.

The muscles of the heart were fatty in all cases. In seven this was moderate; in the others it was extreme, or even enormous. Usually diffuse, it never presented the marbled, or speckled look characteristic of pernicious anæmia. The right ventricle was more affected than the left, although the reverse relation occasionally presented itself. Together with this there was twice found a colloid-like degeneration of the fibres. The alterations in the nerves are considered to be the cause of these degenerations. In two uncomplicated cases there were evidences of inflammation either as a diffuse interstitial infiltration, or as small, disseminated foci. The blood was fluid, and the thrombi described by the older writers are probably of post-mortem origin. A light atheroma of the aorta was present in about one-half the cases.

Hyperæmia and œdema of the lungs were found, and occupied a varying distribution and intensity.

The liver and kidneys were filled with blood in consequence of the general venous congestion, and there was granular and fatty degeneration of the cellular elements, often to be distinguished by the naked eye Small hæmorrhages in the pelvis of the kidney were twice noted, and in a number of cases a general increase of the nuclei. In the liver these latter lay partly in the interlobular tissue and partly in the acini. In the kidney they were, as a rule, beneath the capsule. In one case, complicated by typhoid, small abscesses were present in the renal substance.

The spleen was always more or less enlarged, but as malaria was present in the region too much weight should not be attached to this fact.

Venous hyperæmia, varying in extent and variety, with occasional small hæmorrhages beneath the mucosa, was seen in the intestinal tract.

Hydropericardium with general œdema was of very frequent occurrence.

The infectious nature of beri-beri is very probable, although as yet no parasite has been found. For this speak (1) the granular and parenchymatous degeneration of the solid organs; (2) the inflammatory foci in the heart and muscle; (3) the existence of a splenic tumor in the acute cases.

A FATAL PEMPHIGUS-LIKE DERMATITIS WITH CHANGES IN THE NERVOUS SYSTEM.

Meyer [1] records a case which can be briefly summarized as above, and of which the following is a short history, with a description of the anatomical changes: —

An apparently healthy man was attacked by what was considered as eczema. At the end of four weeks papules, irregularly distributed, appeared on the nates and lower extremities, and gradually assumed the characteristics of pemphigus. The general condition of the patient was unsatisfactory. The appetite was soon lost, the pulse became rapid, and the temperature exhibited an evening exacerbation; sleep poor, and the urine loaded with urates. The strength declined, and the base of the bullæ did not become covered with epidermis as in ordinary pemphigus; in fact, loosening of the epidermis progressed unrestrained, then the epidermis began to scale off in large flakes without the accumulation of any amount of fluid beneath. It recalled the process in the skin after a severe burn. Within seven weeks death followed. There were symptoms referable to the central nervous system.

Histological Examination. If a section through the periphery of one of the parts deprived of its epithelium be examined with a low power, the corium was the part which had suffered most extensively. Its upper layers from the point where the process began were infiltrated with round cells, most numerous in the neighborhood of the vessels and the papillæ. This infiltration was superficial. The sweat glands were intact.

The papillæ were enlarged, swollen, and clubbed at the extremities. The blood-vessels were partly injected and partly occluded by new cells.

In places where there was deep destruction the papillæ were entirely wanting, leaving a nodular granulating surface, pierced here and there by the openings of the sweat glands.

The horny layer of the epidermis failed entirely over the diseased portion, on the edges of which were

[1] Virchow's Archiv, vol. xciv., p. 185.

irregular-shaped fragments, from the covering of the ruptured bullæ. The separation had evidently taken place at the summit of the so-called stratum granulosum. In places the points of the papillæ projected quite bare, and where the epidermis was preserved pus cells were freely intermingled.

Nearer the edge of the cellular infiltration and also deeper down beneath the glands were met numerous clear spaces without proper walls, or at most covered with a thin endothelium. These were partly empty and partly filled with a homogeneous coagulated mass, and must be regarded as lymph spaces.

Of the small arterioles lying deep in the cutis and subcutaneous tissue a large number were affected to a high degree by endoarteritis or entirely obliterated. In a small nerve trunk nothing but a slight thickening of the sheath could be detected. With higher powers many of the vascular loops of the papillæ or intervening tissue were bloodless with transparent walls, or else filled with a homogeneous or slightly granular mass presenting the appearance of a hyaline thrombus.

The other organs of the body were normal.

The nerves were further examined after treating with osmic acid. In the small subcutaneous nerves of the forearm, of the back of the foot, and of the thigh there were found numerous nearly empty sheaths, containing a number of nuclei and scattered drops of myeline. Some of the fibres were fatty degenerated in a marked degree. In many the medullary sheath was broken up, there was an accumulation of granular protoplasm with an increase of the nuclei about the sheath of Schwann. At some parts of their course the tubes are entirely collapsed, at others filled with granular myeline or a protoplasm rich in nuclei. Here and there had been formed regular granular corpuscles which lined the empty sheaths of the affected nerves.

The sciatic as well as the brachial plexus showed similarly affected fibres, while in the different muscular nerves they were wanting.

The sympathetic as well as the spinal ganglia were unchanged.

On the other hand the cord showed a marked alteration. Gray streaks could be seen along the posterior longitudinal fissure throughout the entire cervical and dorsal region; further grayish-yellow spots in the posterior bundles in the upper cervical, as well as transparent points in the lateral columns of the lower dorsal and lumbar regions. With the microscope the interstitial tissue was found to be everywhere thickened, and the nerve tubes surrounded by a rigid connective tissue, which was strongly colored by carmine but was very poor in nuclei. Lines of sclerotic tissue were found along the blood-vessels, which were thus rendered impervious. The nerve fibres were either affected singly or in groups, and were often so atrophied as to be recognized only as small colored points. This process was confined chiefly to the posterior and lateral portions of the cord while the anterior columns remained intact. In the gray substance the ganglion cells were found to be markedly pigmented, as is often the case in old people.

In this case we are not authorized to assume at once a direct connection between the sclerosis of the cord and the affection of the skin, since there is another process at work which may stand in a causal relation to both: namely, the obliteration of numerous vessels both in the spine and in the skin. This is all the more remarkable as there was not the slightest trace of such endo-arteritis obliterans in any of the internal organs. It may be considered that the alteration in the vessels, which had persisted for a long time, gave rise to nutritive changes, and this led, as is so frequently the case in the cord, to sclerosis of the connective tissue. When this had become dense enough a compression of the nerves resulted, and from this central disturbance changes were set up in the skin, which soon reached an unusual and fatal intensity, from the impairment of nutrition due to the arterial obliteration.

Naturally this is but an hypothesis, and further investigation must show what connection coincident destructive changes in the vessels of the skin and nervous centres can have.

Reports of Societies.

THIRTY-FIFTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

THURSDAY, MAY 8TH. THIRD DAY.

The Association assembled at the usual hour in the morning, and prayer was offered by Rev. Dr. Paret.

Dr. Keller, on a question of privilege, asked the Association to change the Secretary's Report, thus enabling the Nominating Committee to designate a time for the annual meeting, according to an amendment to the By-laws adopted at the last meeting. This was granted.

A Nominating Committee, as follows, was appointed to fill vacancies in the Board of Trustees of the Association's *Journal:* Drs. Ferguson, New York; Briggs, Tennessee; Reeves, West Virginia; Prewitt, Missouri; Peck, United States Navy; Russell, Missouri; Stormont, Kansas.

MEDICAL MUSEUM AND SURGEON-GENERAL'S LIBRARY.

The Committee on the Army Medical Museum and Library of the Surgeon-General's Office reported that Congress had been memorialized in behalf of a suitable fire-proof building and increased annual appropriations. The only result had been a favorable report from the Committee of the House for an appropriation of $10,000 for the Library. The Committee was continued.

SCIENTIFIC RESEARCH UNDER GOVERNMENT PATRONAGE.

Dr. George M. Sternberg, U. S. A., offered the following resolutions:—

Resolved, That we earnestly petition the Congress of the United States to make suitable appropriations for the prosecution of scientific researches relating to the causes and prevention of the infectious diseases of the human race, to be expended under the direction of the National Board of Health; and that a permanent detail of one medical officer of the army and one of the navy be authorized for the prosecution of researches of this nature.

Resolved, That a committee of five members of this Association be appointed to present copies of these resolutions to the Speaker of the House of Representatives, to the President of the Senate, and to the chairmen of the Committees on Public Health of the House and of the Senate.

The resolutions were adopted, and the President appointed the following gentlemen the committee: Dr.

Sternberg (chairman), Dr. Albert L. Gihon, U. S. A., Dr. I. M. Hays, Philadelphia, Dr. J. C. Dalton, New York, and Dr. J. E. Reeves, West Virginia.

CREMATION.

DR. KELLER, of Arkansas, presented a resolution to the effect that in a few years the cremation of the dead would be regarded as a sanitary necessity, that the decision of the courts had pronounced this method legal, and that from hygienic, religious, and sentimental stand-points this method of disposing of the remains of the dead was the best. Dr. Keller said that the remains of the late Dr. Gross were now on their way to be cremated, and asked for the adoption of his resolution. The chair ruled that the resolution was out of order because it introduced new business.

THE INTERNATIONAL MEDICAL CONGRESS, 1887.

The Committee appointed to consider a resolution inviting the International Medical Congress to meet in this country in 1887, reported through their chairman, Dr. Billings, a recommendation that a committee of seven (with the President, Dr. Flint) be appointed to invite the Congress to meet in Washington, and, if the invitation be accepted, that this committee act as the executive committee of arrangements, with power to add to its number, elect its own officers, and draw upon the Association for necessary expenses for a sum not exceeding five hundred dollars.

REPORT OF THE TRUSTEES OF THE ASSOCIATION'S JOURNAL.

DR. J. M. TONER, of Washington, chairman of this board, read a report on the financial condition of the Association and of its *Journal*, now published in Chicago. The *Journal* as now published gave six times as much reading matter yearly as was contained in the former transactions. It was believed there would remain on hand at the end of the financial year $500 over and above the expenses. Dr. Toner thought the receipts had been kept down by the restrictions on advertising. The editor's report, read by Dr. Toner, stated that estimates had at first been made on the basis of 2500 subscribers, but that the actual circulation had been 3436, of which 3271 were among members and subscribers. The advertising had been slowly increasing, and the whole amount received from this source was estimated at $3000. The total income for the year had been $18,547.50. Dr. Davis believed that the financial condition of the *Journal* was such as to enable him, should he continue to be the editor for another year, to widen its scope of usefulness by engaging correspondents in more of the large cities, and to justify him in devoting more time to its editorial management.

In the opinion of the Trustees, the report of the editor showed the *Journal* to be in a satisfactory condition; it had been conducted with economy, ability, and judgment; the best interests of the Association had been kept in view, and its dignity maintained with rare discretion. It is believed that the experience gained during the past year, with the increased funds, will enable the editor to do better work in the future. In April of this year Dr. Davis had presented his resignation, but after correspondence with the Trustees he consented to withdraw it. Dr. Davis had informed them that while he would do the best he could for the *Journal* during the coming year, at the end of that period he would absolutely resign. Bids received from various firms for the publication of the *Journal* for the coming year were none of them as advantageous as those of the present publishers, and they had again been given the contract.

A minority report on the *Journal* was presented by DR. JOHN H. PACKARD, of Philadelphia, who began by stating his conviction that he could in no other way discharge his duty as a trustee. He did not desire to reflect on his colleagues, and was not hostile to the editor. He was influenced by no personal motive other than the warm interest he had taken in the success of the enterprise for the past four years, and he certainly had no desire to hamper it in any way. He had, however, understood that the financial condition of the *Journal* was really straitened, and that the editor had not drawn his salary. Of this he strongly disapproved. Moreover, he dissented from the majority report not merely from a financial point of view. The *Journal* had not even approached the standard which the organ of the Association should attain. He did not forget the difficulties confronting a new enterprise of this kind, but the defects of this publication were not those of youth, and were not decreasing. The object of the *Journal* should be not merely to spread out the minutes of the Association or papers read over one year. The object should be to make a strong, wide-awake, high-toned periodical, well equipped in every respect to be a medium of communication between members all over the country, and not a sectional or partisan organ of the Association. A thoroughly trained corps of editors is requisite. Access must be had to large libraries, where there is also opportunity to secure auxiliary work, and contributions should be liberally paid for. Facilities for mechanical execution are essential to real success. Of these requirements scarcely any seem to have been possessed. Due respect for the interests of the Association compelled him to state this as his sincere and deliberate judgment. He therefore recommended that the resignation of the editor, Dr. N. S. Davis, be accepted, and the publication of the *Journal* be transferred to some Eastern city, Washington, Philadelphia, or New York.

A motion to lay the minority report on the table was carried by 191 ayes to 74 nays, and a motion to adopt the majority report was put and carried.

OFFICERS FOR THE ENSUING YEAR.

The Committee on Nominations reported through its Chairman, Dr. Hooper, the following list of officers for the ensuing year: —

President. — H. F. Campbell, M. D., of Georgia.

Vice-Presidents. — J. S. Lynch, M. D., of Maryland; D. D. Mercer, M. D., of Nebraska; J. W. Parsons, M. D., of New Hampshire; H. C. Ghent, M. D., of Texas.

Treasurer. — R. J. Dunglison, Pennsylvania.

Librarian. — C. H. Kleinschmidt, District of Columbia.

Chairman of Committee of Arrangements. — S. D. Logan, New Orleans.

Secretary. — W. B. Atkinson, Pennsylvania.

Assistant Secretary. — W. H. Watkins, New Orleans.

Judicial Council, to fill vacancy, 1886, J. K. Bartlett, M. D., of Wisconsin.

To fill vacancies caused by expiration of term of service: J. H. Murphy, M. D., of Minnesota; J. M.

Toner, M. D., of Washington; W. Brodie, M. D., of Michigan; H. D. Holton, M. D., of Vermont; A. B. Sloan, M. D., of Missouri; W. B. Ulrich, M. D., of Pennsylvania; W. M. Beach, M. D., of Ohio.

OFFICERS OF SECTIONS, AND COMMITTEES.

Practice of Medicine. — H. D. Didama, M. D., of New York, Chairman; G. M. Garland, M. D., of Massachusetts, Secretary.

Obstetrics. — R. S. Sutton, M. D., of Pennsylvania, Chairman; J. T. Jelks, M. D., of Arkansas, Secretary.

Surgery. — Duncan Eve, M. D., of Tennessee, Chairman; E. B. King, of Pennsylvania, Secretary.

Ophthalmology. — Joseph A. White, M. D., of Virginia, Chairman; Eugene Smith, M. D., of Michigan, Secretary.

Diseases of Children. — John H. Pope, M. D., of Texas, Chairman; S. S. Adams, M. D., of District of Columbia, Secretary.

State Medicine. — E. W. Schaeffer, M. D., Chairman; J. M. McCormick, M. D., of Kentucky, Secretary.

Oral and Dental Surgery. — A. W. Harlan, M. D., of Illinois, Chairman; J. Ewing Mears, M. D., of Pennsylvania, Secretary.

Trustees of Journal. — H. F. Campbell, M. D., of Georgia; J. H. Packard, M. D., of Pennsylvania; Leartus Connor, M. D., of Michigan.

Necrology. — J. M. Toner, M. D., of District of Columbia, Chairman.

Committee on Necrology. — C. H. Franklin, M. D., Alabama; W. N. Yates, M. D., Arkansas; W. R. Clump, M. D., California; Charles Dennison, M. D., Colorado; C. W. Cranzoni, M. D., District Columbia; J. G. Thomas, M. D., Georgia; J. H. Hollister, M. D., Illinois; J. F. Hibbard, M. D., Indiana; C. V. Motram, M. D., Kansas; D. S. Reynolds, M. D., Kentucky; B. A. Ashby, M. D., Maryland; H. O. Marcy, M. D., Massachusetts; W. F. Brenkey, M. D., Michigan; A. J. Stone, M. D, Minnesota; Dr. Smythe, Mississippi; R. C. Moore, M. D., Nebraska; Stephen Wicks, M. D., New Jersey; J. Lewis Smith, M. D., New York; E. E. Graves, M. D., New Hampshire; F. E. Larrimore, M. D., Ohio; I. Minis Hays, M. D., Pennsylvania; W. E. Anthony, M. D., Rhode Island; T. T. Robertson, M. D., South Carolina; D. D. Saunders, M. D., Tennessee; —— Harris, M. D., Texas; C. M. Chandler, M. D., Vermont; H. M. Clarkson, M. D., Virginia; W. F. Van Kirk, M. D., West Virginia; J. K. Bartlett, M. D., Wisconsin; W. R. Forward, M. D., United States Navy; N. L. Bates, M. D., United States Navy; H. W. Austin, M. D., United States Marine Hospital Service.

METEOROLOGY.

The Committee on Meteorology reported through its chairman, DR. N. S. DAVIS, that the observations on the relations of meteorological conditions to acute diseases had been but few, owing to the lack of general interest in the matter. The investigations regarding ozone and organic matter had been carried out systematically in the past year, and the results were published, in part, in the *Journal*. Dr. Davis recommended that the work of the committee be continued.

COLLECTIVE INVESTIGATION OF DISEASE.

As chairman of the committee on this subject DR. DAVIS reported in favor of accepting a proposition from a similar committee of the British Medical Association in favor of coöperation, and recommended the appointment of a central committee of seven members, with power to appoint a sub-committee in each State, to correspond directly with the British Committee on Collective Investigation. A sum, not exceeding $300, should be appropriated to enable the central committee to inaugurate the work. The same cards and blanks might be used by the two Associations. The report and recommendations were adopted.

The Judicial Council made a short report on matters of discipline.

The Address in Surgery was read by title only, the subject being The Effects and Results of Operations for the Relief of Gunshot Wounds of the Small Intestine.

The Association then adjourned to Friday.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

SIXTH ANNUAL CONGRESS, HELD IN THE CITY OF NEW YORK MAY 12, 13, AND 14, 1884.

FIRST DAY. MORNING SESSION.

THE Association met at the hall of the New York Academy of Medicine, and after the roll-call listened to an Address of Welcome by the President, DR. FRANCHE H. BOSWORTH, of New York, who at its conclusion read a paper on

THE CLINICAL SIGNIFICANCE OF FIBRINOUS EXUDATIONS UPON THE MUCOUS MEMBRANE OF THE UPPER AIR-PASSAGES.

The following conclusions were arrived at by the author: —

(1.) That a fibrinous exudation which occurs in the crypts of the follicles of the faucial or pharyngeal tonsil or mucous membrane of the lower pharynx has no tendency to extend, and characterizes a disease which is self-limited and not dangerous to life.

(2.) That a fibrinous exudation which occurs upon the surface of the tonsil or of the mucous membrane of the fauces constituting a croupous membrane, so called, presents gross appearances by which it can be unmistakably recognized.

(3.) That a croupous membrane in the fauces of an adult marks the existence of a disease which, while being undoubtedly a blood-poison, is still a self-limited infection, and which involves no danger to life.

(4.) That a croupous membrane forming in the fauces of a child marks the occurrence of the same disease as croupous membrane in an adult, but in the child there is the additional danger of a new centre of development arising in the larynx, where it may involve the greatest danger to life, but entirely as a mechanical obstruction to breathing.

(5.) That a diphtheritic membrane developing in the fauces marks the occurrence of a disease which is dangerous to life, not only from primary and secondary blood-poisoning, but also from the tendency to the development of the same morbid process in the larynx.

Mucous membrane that was in a state of acute catarrhal inflammation offered, he thought, a favorable nidus for the occurrence of diphtheritic deposit without there being any necessary connection between the two

processes. The catarrhal condition was not, in his opinion, the prodromal stage of the diphtheria.

DR. BEVERLEY ROBINSON made some extended remarks in which he took exception to many of the views presented by Dr. Bosworth. Thus with regard to the question of follicular tonsillitis, the pathological appearances of the exudation from the interior of the follicles did not resemble microscopically the condition to which Dr. Bosworth alluded in speaking of the true croupous membrane. There was found simply cheesy masses which were pressed out from the interior of the crypts and did not in any sense partake of the nature of an exudation which was usually regarded as fibrinous. With regard to the question of croupous tonsillitis, he said that while there were, perhaps, many cases in which the membrane itself did characterize the type of a disease which was only of a certain local quality, yet he had seen cases in which the mucous membrane did not seem to be incorporated with the false membrane itself, where the affection seemed to be of mild type, but after a few days they became of a very serious character, the membrane, which at first had been white and easily detached, becoming dark and so firmly adherent to the underlying tissue that he could not then say the case was not one of diphtheria. He thought that there were a certain number of cases ordinarily called croupous tonsillitis, which in all probability began, as stated by several authors (among them Dr. DaCosta), in a herpetic eruption of the tonsils. As to the origin of these affections in the local absorption of certain germs, while the President's views, shared by many others, might have a theoretical basis, they were in his own mind far from being proven. Unquestionably we did find in such affections of the air-passages the presence of bacteria, but the microscope might fail to show the slightest difference in their appearance whether they were present in one affection or another, and we were unable to say whether such germs were active in carrying the poison or whether they were entirely innoxious.

DR. W. C. JARVIS said that he could for the most part substantiate the views of Dr. Bosworth as regards the gross pathology of the exudation met with in the upper air-passages. Several years ago his attention had been first called to inflammation of the pharyngeal tonsil by the occurrence of the affection in his own person. His inference as to the complication of the third tonsil was afterward verified by repeated observations upon numerous subjects of the disease. A feature of acute follicular pharyngitis which did not seem to have received any attention was one in which the secretion was retained, eventually escaping upon rupture of the membrane, and covering the pharynx with a white membrane. Such a change did not occur when the inflamed follicles remained patent.

DR. F. I. KNIGHT said he wished to call attention to an important practical point which he thought was quite apt to escape the attention of physicians, and that was the increased susceptibility to diphtheritic infection during the existence of any simple acute inflammation of the air-passages. Hence, however mild the latter might be, he thought it advisable to give a guarded prognosis.

DR. S. W. LANGMAID thought that at the beginning there might be the symptoms of only a simple pharyngitis, while in reality the case began as one of diphtheria, its true nature being masked until later.

The PRESIDENT said that the point made in his paper was that a membrane in a state of acute inflammation offered a better nidus for the germ which developed the diphtheritic or croupous process than did the healthy membrane. He felt called upon to take exception to Dr. Robinson's view that follicular tonsillitis was ever characterized by cheesy deposits in the crypts of the tonsils. The resemblance of the pathological characteristics of the exudation to those of croupous membrane on the surface was sufficiently close to warrant us in the conclusion that the two conditions were very nearly allied, if not identical, the difference being only such as we would expect to find from the difference of location in the two deposits. In some cases, indeed, the membrane overflowed the crypts, as it were, and spread out on the surface, constituting a membrane in the true sense of the word. He wished particularly to emphasize the point that we could by examination throw a great deal of light on the clinical tendencies of inflammatory diseases of the fauces. As regards the matter of germinal ætiology, it seemed to him that in the absence of any more definite theory this presented the best explanation of the facts noted.

DR. JOHN N. MACKENZIE, of Baltimore, read a paper entitled

A CONTRIBUTION TO THE STUDY OF CONGENITAL SYPHILIS.

In the first part of it he detailed with great minuteness a case which had come under his observation. The child remained in a healthy condition from the first to the third year, when the first trouble to develop was interstitial keratitis of both eyes. Both eyelids also became paralyzed, and there was intense occipital cephalalgia, which lasted over a month. This was before Dr. Mackenzie saw the case, but under intelligent treatment these symptoms subsided, though the child was left with internal strabismus of the right eye and deafness of the right ear. Afterwards it suffered from violent ulcerative inflammation of the pharynx, tonsils, and larynx, and extreme ulceration of the hard palate, with dysphagia, complete aphonia, and profuse and continuous muco-purulent discharge. While all these troubles were still increasing in severity the patient was taken with a mild attack of scarlatina, which had a most salutary effect upon all the lesions and symptoms. There were two features which he thought were of special interest in this case. First, while deep ulceration of the lower pharynx was not rare in congenital syphilis, such a degree of stenosis as existed in this case was very unusual. Second, the paralysis of both upper eyelids, which was undoubtedly of cerebral origin, and probably depending on the presence of gummata.

Further experience, Dr. Mackenzie went on to say, only served to strengthen the force of his convictions on the subject of congenital syphilis of the throat as he had expressed them in an article published in the *American Journal of the Medical Sciences* for October, 1880, in the course of which he had said that a great deal of obscurity still prevailed concerning these palate-pharyngeal ulcerations in consequence of a persistent adherence to the old superstition that referred them indiscriminately to scrofula; an examination of the subject showing that syphilis, tuberculosis, and lupus were all alike ascribed to it. But, excluding lupus, tuberculosis, and certain other rare forms of ulceration, he had maintained that deep palate-pharyngeal de-

struction in children was nearly always the result of syphilis.

Dr. Mackenzie then announced the following propositions: —

(1.) That in congenital syphilis deep ulceration may invade the pharynx and naso-pharynx.

(2.) That when the eruptions of inherited syphilis are apparently delayed the pharyngeal and laryngeal complications are apt to be more severe.

(3.) That females are more frequently attacked with throat ulcerations than males.

(4.) That ulceration may occur in any situation, but its favorite situation is the palate, and especially the hard palate.

(5.) That when ulceration occurs at the posterior part of the hard palate the tendency is to involve the soft palate and velum.

(6.) That the next most common seats of ulceration in their order of frequency are the fauces, naso-pharynx, posterior pharyngeal wall, nasal fossæ and septum, the tongue and the gums.

(7.) That ulceration, especially that of the palate, shows a disposition to centrality of position together with a special tendency to caries and necrosis of the bone.

(8.) That the tendency to necrosis exists at all periods of life, but especially in early youth, at which period it is more destructive and less amenable to treatment.

(9.) That whilst deep pharyngeal ulceration generally precedes or coexists with similar affections of the larynx, the latter occurs too without evidence of pre-existing pharyngeal lesions.

(10.) That laryngeal ulceration does not commonly follow the pharyngeal destruction of so-called latent syphilis, those palato-pharyngeal ulcerations found in tardy congenital syphilis having little tendency to invasion of the larynx, but rather to infiltration of the naso-pharynx and nose.

(11.) That simultaneous or consecutive ulceration of the palate, pharynx, and nose seems to be characteristic of syphilis, or at least seems to occur more frequently in this than in any other disease.

While the throat ulcerations of congenital syphilis showed a tendency to produce rapid destruction of tissue, and were often uncontrollable by medicinal measures, the lesions sometimes subsided as if by magic on the occurrence of severe acute exanthematous disease, the poisons of the two affections being apparently mutually destructive. These remarks did not apply to diphtheria, however, as this disease seemed only to aggravate the existing troubles, and the patient usually succumbed rapidly to its attack; but between congenital syphilis and such acute fevers as scarlatina, measles, and chicken-pox there appeared to be a well-marked antagonism.

The paper was discussed by the President and Drs. Shurley, Hartman, Knight, and Donaldson, and the opinion of the writer in regard to the identity of syphilitic and so-called scrofulous ulcerations of the throat was in the main sustained by the speakers, Dr. Knight calling special attention to the great difficulty, if not impossibility, of getting at a syphilitic history in many cases. In reply to a question of the President, Dr. Mackenzie said that in the treatment he relied mainly on mercurial inunction and the internal administration of iodide of potassium; and Dr. Bosworth then said that he had of late years been gaining increasing confidence in the use of mercurials, rather to the exclusion of the iodide.

Appointment of Committees.

The Chair appointed on the Nominating Committee Drs. F. I. Knight, of Boston; George M. Lefferts, of New York; and J. Solis Cohen, of Philadelphia; and on the Auditing Committee Drs. J. N. Mackenzie, of Baltimore; and F. H. Hooper, of Boston.

Election of Fellows.

There being two vacancies in the membership of the Association, which is limited to fifty, Drs. Clarence C. Rice, of New York, and J. Solis Cohen, of Philadelphia, were elected Fellows. The thesis submitted by the former was entitled The Diagnostic Value of Pathological Appearances, and that of the latter A Case of Anchylosis of the Left Crico-Arytenoid Articulation.

First Day. Afternoon Session.

A paper on

Retro-Pharyngeal Abscess

was read by Dr. J. O. Roe, of Rochester, N. Y. He said that the post-pharyngeal cellular tissue was specially liable to abscess from its looseness and comparatively low vitality. Retro-pharyngeal abscesses were divided into two varieties: those originating in the soft tissues, and those originating in disease of the cervical vertebræ. The former variety again were divided into classes: those originating in the glandular structure, and those originating in the cellular tissue. Having given a sketch of the anatomy and glandular connection of the parts, he gave a list of the causes to which retro-pharyngeal abscess had been attributed, dividing them into three classes, — idiopathic, traumatic, and secondary. In speaking of the diagnosis he stated that the condition was to be differentiated from croup, the presence of a foreign body, œdema, pharyngeal tumors, and enlarged tonsils, and that by inspection and digital examination the trouble could usually be readily recognized. The prognosis when the abscesses originated from disease of the bone was unfavorable, and when originating in the soft tissues was least fatal in cases of the idiopathic variety. The only treatment was opening the abscess and evacuating its contents, and for this purpose, as a rule, he preferred a small incision at first, as recommended by Albert, as presenting less liability of the pus getting into the larynx and trachea; afterwards enlarging the opening so as to make the evacuation complete.

This affection was one which occurred for the most part in infants and young children; fully one half of those reported having been in the first year of life. Dr. Roe then gave the histories of three cases which he had seen in consultation. The first two of these occurred in infants under one year, and in both the trouble had been attributed to diphtheritic croup. He operated in the way mentioned above, and in each instance complete and instant relief was afforded. The third case occurred in a young man twenty years of age, who died from exhaustion on the third day after the abscess was opened. Here the pus burrowed downwards behind the œsophagus.

Dr. DeBlois said he had been very much interested in Dr. Roe's paper, evincing, as it did, the result of much laborious research, and particularly because he had himself had three cases. One had been in an adult,

and the two others in children, and in one of these the incision had to be carried through the posterior pillar of the fauces. He differed with Dr. Roe as to the size of the incision, and thought that it should be free, so that the pus could be at once evacuated. After the incision the head should be forced down, and if in a child the patient should be inverted. He thought the position of the head, which he had always found carried very far back in retro-pharyngeal abscess, should be laid stress upon as a point of diagnosis.

DR. GEORGE M. LEFFERTS thought that this affection was much more rare than was generally supposed. He did not believe that it was ever caused by nasal catarrh; for if this was the case it would be very common. Neither did he believe that it was ever due to pharyngeal tuberculosis or injury of the posterior wall of the pharynx. It was probably due to a simple phlegmonous inflammation of the cellular tissue arising from causes which produced abscess elsewhere. The diagnosis was perfectly simple, by inspection and digital exploration, and the treatment was to be founded upon precisely the same surgical principles on which abscess elsewhere in the body was treated.

DR. GEORGE W. MAJOR stated that the first case under his notice occurred in a child four years of age as a sequence of measles. Dyspnœa and dysphagia were very marked, but instant relief followed excision and evacuation of the pus. The second case, which followed after cerebro-spinal meningitis, and was attended by the most urgent symptoms, was also immediately relieved by opening. A third case had been referred to him by an ophthalmic surgeon as one of retro-pharyngeal abscess, and although palpation did not bear out the presence of pus he made an exploratory incision, cutting into an evidently malignant growth. Eighteen months afterward the patient died, when a large sarcoma was found occupying and absorbing a large portion of the base of the skull and pressing on the brain.

DR. R. P. LINCOLN related a case illustrating the fact that other operative interference than simple incision of the posterior wall of the pharynx, in order to get rid of the contents of these abscesses, was sometimes necessary. On incising the abscess in the pharynx this part immediately collapsed, affording prompt relief from threatened suffocation; but there was no perceptible change in the size of two other tumors which caused bulging on each side of the neck under the angle of the jaws, though they seemed to be less tense. By introducing the aspirating needle into each they were readily evacuated, though on the left side it was necessary to repeat the operation twice.

DR. J. N. MACKENZIE called attention to the possibility of confounding a gummy, syphilitic tumor of the posterior pharyngeal wall with a retro-pharyngeal abscess, and related a case referred to him where the mistake had been made by a brother practitioner.

DR. E. F. INGALS related two cases occurring in his experience: one in a child ten months old, and the other in a man about fifty years of age. The latter came to him because of laryngeal trouble, and the retro-pharyngeal abscess, which developed slowly, opened spontaneously. Soon afterward the patient died of cerebral meningitis, and the cause of the abscess seemed to be the same as that of the latter.

DR. C. W. CHAMBERLAIN had also seen two cases. The first was of the ordinary character; but the second was apparently unique. The abscess was situated posterior to the left tonsil, and as the case was in the country its importance was not at first recognized. When urgent symptoms set in, Dr. Chamberlain was sent for, but did not arrive until too late. The abscess had opened spontaneously, and very profuse hæmorrhage, which quickly proved fatal, had ensued. The autopsy showed that the cause of death was rupture of the internal carotid artery from weakening of its walls by the abscess. The child was probably syphilitic, he thought.

The paper was also discussed by Drs. Jarvis, S. Johnston, and Cohen, and the discussion brought to a close by Dr. Roe.

DR. T. A. DEBLOIS, of Boston, read a paper on

CONGENITAL WEB OF THE VOCAL BANDS, WITH CASE.

The case was that of a female patient twenty years of age. Her voice was weak and puerile, and she stated that this had always been the case. She was first under the care of Dr. Farlow, his colleague, at the clinic where she was seen, and afterwards under his own. The patient had a very dependent epiglottis, and the parts were so sensitive that it was a considerable time before any view of the larynx could be obtained. It was then found that the anterior half of each vocal band was covered by a white web which extended between them. The intolerance of the larynx having after a time been in a measure overcome, Dr. DeBlois introduced a Mackenzie forceps with the idea of tearing the web apart, but only succeeded at first in scratching it. Afterwards, however, he was able to split it across, leaving a jagged, dentated edge on each side, but the next day he found, to his chagrin, that the torn surfaces had united. He then introduced a probe to break up the adhesions, and the treatment of expansion was afterwards continued by Dr. Farlow. As a result of these procedures the voice of the patient gained in register three upper notes and four lower ones. Having completed the history of the case, Dr. DeBlois said that the bibliography of the subject was meagre, and that he had been able to find only three similar cases recorded. These he quoted.

DR. M. J. ASCH said that he had met with one case which was not congenital, but the result of inflammatory action, and there was also a web of one eye. The patient refused operative interference.

DR. J. H. HARTMAN said he questioned the advisability of introducing and forcibly expanding a pair of lateral forceps in the larynx, and would prefer the use of the covered or tube bistoury for the division of webs.

DR. WM. H. DALY, of Pittsburg, read a paper on

GUNSHOT WOUND OF THE LARYNX, INVOLVING THE VOCAL BANDS.

He expected to have presented the patient to the Association, but he had been unable to attend.

DRS. J. SOLIS COHEN and M. J. ASCH spoke of the rarity of this accident. The former said that he once had the opportunity of seeing Dr. Daly's case, and at that time he doubted the correctness of the diagnosis; but the subsequent history proved conclusively that he had been mistaken.

DR. GEORGE M. LEFFERTS said that there was one specimen of gunshot wound of the larynx in his collection at the College of Physicians and Surgeons, but, unfortunately, there was no history with it. The ball had undoubtedly remained in the larynx, as a

tracheotomy wound was visible; the operation having probably been performed for the relief of dyspnœa.

The last paper of this session was by DR. J. SOLIS COHEN, of Philadelphia, and was entitled

A CASE OF COMPLETE PARALYSIS OF THE LEFT VOCAL BAND IN EXTREME ABDUCTION, THE RESULT OF AN INCISED WOUND OF THE NECK.

This he considered was a unique and extraordinary case. The wound, although the patient denied this, was undoubtedly suicidal, being made from behind forward. It severed the sterno-cleido-mastoid muscle, was deepest just in the track of the pneumo-gastric nerve. There had been complete aphonia ever since the injury, which was stated to have been received in November, 1883, and the left vocal band was found to be immovable in a position of extreme abduction, while the right band was normal. In forced inspiration the latter did not go as far out as the left constantly remained. The case and the somewhat obscure subject of adductor paralysis brought up by it gave rise to a discussion of some length by the Fellows, in which no great amount of light was thrown upon the matter. Dr. Cohen stated that he regretted very much that some of the gentlemen who had recently been attending the American Medical Association at Washington had not stopped over in Philadelphia, as he had urged them to do, so that they might see the case for themselves.

In the evening the President gave a reception at his house to the Fellows of the Association, at which many prominent medical men of the city were present to meet them.

(To be continued.)

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

MAY 12, 1884. The President, Dr. CHARLES D. HOMANS, in the chair.

DIABETIC COMA.

DR. R. T. EDES reported the case. The patient had been in the City Hospital a year ago for the removal of a tumor in the leg, and afterward began passing much saccharine urine, became emaciated, and was admitted to the hospital a week ago. The diet had been rather limited, although the so-called diabetic bread, which is never entirely free from starch, had been allowed. Because of vomiting the diet had been for a short time even more limited.

Yesterday morning the patient got up and then went to bed again, and was found, at half-past nine, partly comatose, breathing deeply, but at the normal rate, with dull eyes, cold extremities, and livid hands and face, the hands being purple, but the face blue. Consciousness was not entirely gone, as an attempt to examine the eyes was resisted. Brandy and ether were injected subcutaneously, and later carbonate of ammonium and brandy were swallowed. Although the patient roused slightly, death occurred at eight in the evening, the temperature at no time rising above ninety-four in the axilla and ninety-five in the rectum. Five ounces of urine were got by the catheter, but it has not yet been examined.

Certain points in the case seemed to the speaker of interest. First, ether given under the skin in the morning was smelt in the breath three and a half hours after. Second, most cases ending in diabetic coma have made rapid progress. Here the disease lasted less than a year. Third, this patient had shortly before the attack had a senna injection which, as it proved, did not prevent its occurrence. Fourth, there had been no narcotic given. Last, the diet had been low and had been almost wholly meat. That had been advanced as a cause of diabetic coma. Dr. Edes had, on the other hand, seen a case in consultation with Dr. Post, in which the patient had been under observation and treatment for but a few days, and who nevertheless died in this way.

DR. BUCKINGHAM said that he had been called to see diabetic coma in a boy, from whose care he had been discharged some time before, and who had meanwhile, for some weeks and quite up to the time of the attack, been living largely on starchy food. The cause of coma cannot, always at any rate, be the exclusive use of an animal diet.

DR. O. F. WADSWORTH read a paper on

HEMIANOPIA.[1]

DR. G. HAY said that he was very glad to have heard this paper. The course of the optic nerve fibres in their continuation through the brain is an interesting subject. First, as a matter of anatomy. It is only recently that they have been considered to extend to the occipital lobe. Such a course of the fibres is not given in some comparatively recent text-books of anatomy. And this is not strange, for he supposes the fibres have not even yet been followed continuously through this course by the anatomical observer. The evidence that they extend to the occipital lobe is derived from clinical observation and pathological anatomy. The conclusion, however, is equally valuable, though arrived at indirectly.

Although at times we may be in doubt whether the cause of an hemianopia is in the optic tract or the occipital lobe, yet the knowledge of the position of the visual centre must contribute somewhat to the solution of the complicated problems of cerebral diagnosis.

A point of interest to him in this position of the visual centre, so remote from the eye, is that this is consistent with the doctrine that something more than the eye is concerned in vision.

This extended course of the optic fibres has some relation to the physiology of vision; and as this latter (vision) is a complex process, it may be, considering this complexity and the extent of the optic fibres, that all the parts of vision are not related in precisely the same way to the nervous apparatus.

Light and color may perhaps have some special relation to the retina, while the conception of form and distance may be more intimately associated with another part of the nervous apparatus. Then we have in vision, he thinks, a conviction of the objective reality of the thing seen, and also it is to be noticed that although memory is to be distinguished from vision and applies to other matters, such as sound and ideas, yet it is essential to the efficiency of our vision. For instance, if in all cases we failed to remember that we had ever seen an object before, such vision, divorced from memory, would be practically very different from what it is at present, and comparatively useless.

Differences of opinion exist with regard to the rela-

[1] See page 483 of this number of the JOURNAL.

tion of the mind to the brain, but the subject is an abstruse one, and probably requires for its solution considerations other than what we generally consider as merely physical.

Dr. Hay desired to express again his pleasure at having heard Dr. Wadsworth's instructive paper, and considered it as one not merely to be listened to once, but as deserving to be studied.

DR. J. J. PUTNAM spoke of the importance of the subject of vision to general practitioners. Cases sometimes occur in which early recognition is of value, as, for instance, after injury, when loss of vision may be hysterical, but hemianopia is not likely to be simulated.

He mentioned a gentleman who lost the power not of seeing, but of attaching significance to what he did see; who found that he could not read, and could recognize friends only with difficulty. Here was a lesion, functional indeed, in that part of the brain that attaches ideas to what is seen. The location of function may be of practical use, and ought to be the common property of the profession.

DR. EDES inquired of Dr. Wadsworth if it is settled that hysterical amblyopia is never confined to one side.

DR. WADSWORTH answered that he would not say that it is universally accepted, but that in all the reported cases examined by competent oculists it has been found to be double. It is usually greater in one eye than in the other.

He also referred to the case of word blindness mentioned by Dr. Putnam, and said he had recently seen, in an article in the *London Medical Record*, the statement that in such a case Charcot had found the only vision to be situated in the angular gyrus.

DR. W. W. TEMPLE reported four cases of

POISONING BY FUMES OF NITRIC ACID.

The cases resulted from the accidental emptying of a carboy of commercial nitric acid.

CASE I. Mr. I. S., aged twenty-four. Health good at time of accident (September 17, 1883). By mistake a carboy of commercial nitric acid (containing one hundred and sixty-five pounds) was brought to the store in which the young man worked. In attempting to get the box containing the carboy back on the truck the stopper came out, and the carboy emptied itself rapidly on the floor, and in attempting its removal the fumes of the acid were inhaled. The sensation was that of suffocation. He would rush out to the air for a moment or two and then return again. This was continuing for thirty to thirty-five minutes, after which the irritating effect passed off. Whilst in the air he felt quite himself. In about three hours he began to have a sense of constriction about the chest, with cough and pain on inspiration. On going home, his wife noticed his paleness and asking what was the matter, his answer was, "Nothing, only I feel so weak." During the afternoon and evening he coughed considerably with increased pain in the chest, and when seen for the first time on the next morning had the same symptoms. The paleness was a peculiar almost lemon tint. Examination of the lungs was negative. On the third day a few moist râles were noticeable all over the chest. Slight cough with pain on full inspiration, together with a feeling of weakness, were the only symptoms; these had left him at the end of the week, and had it not been for a large ulcer in the gluteal region (caused by falling into the acid) he could have resumed his work. As it was, he remained at home ten days.

CASE II. Mr. L., aged twenty-seven. Health good at time of accident. History of exposure same as previous case. Slight hæmoptysis twice during the day after the accident; then, as he expressed it, "he had a severe cold," which lasted two weeks. Good recovery.

CASE III. A gentleman, aged fifty-seven, exposed to the acid fumes for a few moments, had an attack of pneumonia, which his physician ascribed to that cause.

CASE IV. This is the case of special interest in the series.

Mr. C., aged fifty-four. Health always good, and at time of accident exceptionally so. Due to his interest in the store, his exposure to the acid was much more prolonged than any of the others. In endeavoring to remove the open carboy he slipped and fell, his face and mouth coming in close proximity with the mouth of the carboy; he must in falling have inflated the lungs to their fullest extent, and that with the strong acid fumes. He remained in and about the store until the danger was over, and then went to a neighboring clothier's to get new clothing. Returned to the store and resumed his work, feeling well.

About half-past one P. M. (four hours after the accident), not feeling "just right," he concluded to go out and take the air. Took a horse-car and came up to his brother's on Columbus Avenue. Whilst there he was evidently not feeling well, and first began to cough. Coughing was painful, and was increased by deep inspiration. He drank some tea, and at three P. M. walked, with assistance, to Dr. Temple's rooms (a distance of half a mile).

Face pale, and anxious expression. Pulse rapid and compressible, 124. Respirations rapid and shallow. This he explained as being due to the fact that deep breathing caused cough and the cough pain. He got a full dose of ammonium carbonate (ten grains). He asked about the possible dangers from the accident. After resting two hours he regained natural color. Pulse 90; better character. Complained only of feeling weak, and a tightness about chest. Cough much diminished. Then took horse cars to Old Colony Depot. In walking from the car to the depot noticed a dragging step, and that the cough was increased by exertion. Took train to his home at Neponset, driving to his house. In going from his carriage to the house noticed the same dragging step with evident loss of muscular power. During the night he coughed almost incessantly, expectoration being frothy and of a straw color.

Examination of chest negative.

September 18th. Toward morning he was much easier, coughing only occasionally. Took considerable milk (a tumblerful every hour for three hours). Pulse 90; fair character. Respiration 24. During the morning he continued comfortable, and took nourishment often.

Three P. M. Much the same condition. Pulse 94; fair strength. Respirations, somewhat more rapid, 28. Free from pain with the exception of a sensation of tightness about chest.

Half past five P. M. Pulse 120; feeble. Respiration 44. Coarse râles heard all over chest. At 6.15 he died.

Autopsy, forty-eight hours after death, by Dr. F. W. Draper.

Both lungs free.

Heart. Right auricle a little distended, but not engorged. In posterior wall of right auricle four small ecchymoses grouped. Whole heart retains blood which is of dark color and firmly clotted. Size of heart normal. Structure normal.

Endocardium — normal.

Lungs. External color of left lung rather darker than normal, pits on pressure, markedly œdematous and crepitant in every part. Bronchial mucous membrane but little reddened and with no apparent swelling.

Right lung. More deeply reddened, with more tendency to engorgement. Mucous membrane of larynx and trachea injected to a marked degree; just above the bifurcation of the trachea and at the opening of the right bronchus are four minute submucous ecchymoses, the largest the size of a pin's head.

Vocal chords free, and chink of glottis open.

Epiglottis. Its inferior surface shows marked congestion, and at its base several submucous ecchymoses, the size of a pin point.

Kidneys and *liver* injected.

Stomach, intestines, spleen, normal.

Christison and Taylor both report cases that are so similar to the last one that perhaps it would be interesting to review the notes on them.

In March, 1854, Mr. Haywood, a chemist, of Sheffield, England, lost his life under the following circumstances: He was pouring a mixture of nitric and sulphuric acids from a carboy containing sixty-five pounds, when by some accident the vessel was broken. For a few minutes he inhaled the fumes of the mixed acids; three hours after the accident he was sitting up and appeared to be in moderately good health. He was seen by a medical man, and complained merely of some cuts about his hands. Later he coughed violently. In three hours more there was difficulty of breathing with increase of the cough, also a sense of tightness at the lower part of the throat. At times he could scarcely breathe. He died eleven hours after the accident. Autopsy showed congestion of the trachea and bronchi, with effusion of blood. Heart flaccid, and contained but little blood. No record of condition of lungs.

The other case is as follows: A chemical manufacturer, in endeavoring to remove from his store-room a hamper in which some bottles of nitric acid had burst, breathed the fumes for some time, and was seized in four hours with symptoms of inflammation. At night his urine was suppressed, the skin became blue; at last he was seized with hiccough, acute pain in the diaphragm, convulsions, and delirium. Death in twenty-seven hours after the accident.

It had occurred to the speaker that death may have resulted from poisoning with nitrous acid, with which commercial nitric acid is contaminated.

The fact that there seems to be a delay in all the symptoms (in all the cases) of several hours he was at a loss to explain, as the effect from the nitrate as to time is not recorded. We may, however, conclude that the fumes are both local and central in their action; that the action is at first irritant to the lungs with a probably direct effect on the heart and muscular coat of the arterioles, and later a centric action on the cord, and that there is bronchial irritation, hyperæmia, and œdema of the lungs, and later pneumonia; also that in the cases there is a stage when there seems to be marked improvement in all the symptoms, giving, for the time being, hope to the physician and friends, but hurrying on later into disastrous and fatal results.

The treatment after removing the cause must be symptomatic. The post-mortem appearances to be expected are, as a rule, if death occur early before pneumonia has set in, only a more or less marked change in the organs of respiration, hyperæmia, swelling, ecchymoses, œdema of the lungs; sometimes possibly, fibrous membranes in the bronchi.

DR. F. W. DRAPER spoke of the great rarity of cases like those reported. He had been able to find only five cases recorded; and it was fair to Dr. Temple to remark that none of them compared with his in fullness and accuracy of detail with regard to the manner of the accident, the subsequent clinical history, and the post-mortem appearances. He regretted, however, that the blood and some of the tissues had not been submitted to chemical analysis. With regard to the writer's ingenious suggestion that the toxic effects might be due to nitrous acid in the system, Dr. Draper admitted that it was in harmony with the clinical data. To those who witnessed the autopsy in the fatal case, the comparatively insignificant changes observed in the air-passages were a surprise, and seemed to indicate that the fatal result had been due more to a general toxic action of the acid than to a simply local irritation.

DR. BENJAMIN CUSHING thought the treatment must be stimulant, with relief to suffering.

DR. CHARLES D. HOMANS referred to a case of Dr. J. M. Warren's published in the first volume of the Records of this Society. A negress swallowed some nitric acid intentionally, staining the inside of the mouth and fauces yellow, swelling the tongue, and causing some shock. There was at no time fever, and in eleven days she was well enough to be transferred from the Massachusetts General Hospital to the jail whence she had come. Two days later she died from hæmorrhage consequent upon a large rupture of the friable stomach.

INHALATION OF AMMONIA.

DR. C. W. SWAN reported the case for the sake of comparing it with those above.

A man of sixty-three was holding a pound bottle of strong liquor ammoniæ on his knees in a horse car on a hot day, when it exploded. He threw himself on his hands and knees in order to get air, as it seemed to him that the vapor shot upward and then fell in his face. The immediate distress for breath was great, and by the time he had reached the nearest drug store the inside of the mouth and tongue were much burnt and covered with white patches; the fauces were less red. He could hardly have swallowed any of the liquid, but there was burning at the epigastrium as well as severe frontal headache. Treatment was with dilute acetic acid at once, the speaker having been a passenger in the car with him. He lost his speech as well as appetite, and sonorous râles were heard. In a week these symptoms began to decline and œdema of the lung appeared. He fairly recovered in a month or six weeks.

— The fifth International Congress of Hygiene will meet at the Hague, August 21 to 27, 1884.

— To overcome the unpleasant odor of anæsthetics the suggestion is made to add a few drops of oil of cloves to chloroform, or one sixth part of cologne to ether, as they are being inhaled.

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THE DIAGNOSTIC VALUE OF THE DISCOVERY OF THE "BACILLUS TUBERCULOSIS" IN SPUTUM.

SINCE Koch first announced his discovery of a micro-organism peculiar to pulmonary phthisis much wordy war has been waged as to the real existence of such a specific organism, as to its relation to the disease whether of cause or effect, as to the best methods for distinguishing the organism from others, and much of this discussion has been the offspring of theory rather than of practical experiments and observations. The determination of the diagnostic value of the presence of these bacilli in sputum is one practical point, and that of the degree of contagiousness of phthisis another, solutions of which would be a grateful conclusion to these discussions, and we welcome any practical work contributing to such ends. In malignant disease of the lung, chronic pleurisy, or chronic pneumonia, bronchiectasis, incipient phthisis, phthisis accompanied by extensive bronchitis, or by deep-seated changes obscured by surrounding emphysema, difficulties are met with by the diagnostician in dealing with which another arm of precision besides auscultation and percussion would be very gratifying.

Dr. Henry S. Gabbett publishes in the *British Medical Journal* (April 26th) a series of observations on the sputa in 110 cases of diseases of the chest made at the Royal Hospital for Diseases of the Chest, London, with a view to ascertaining the presence of Koch's bacilli.

The number of observations is, to be sure, not large upon which to base generalizations, but it is large compared to those hitherto offered by many taking part in discussing these questions, and the material at command and opportunities for discovering the precise condition of the patients were favorable.

Of the observations sixty-five represent those in which bacilli were found in the sputa, and forty-five those in which no bacilli were found. Of the first division fifteen were instances of the last stage of pulmonary phthisis, thirty were less advanced cases in which, however, "there could be no question as to the nature of the disease," and the remaining twenty were either examples of incipient phthisis or cases in which the diagnosis was very doubtful at the time of examination.

The forty-five observations of the second division represent instances of other diseases than phthisis, in all which the sputa were searched in vain for bacilli. Dr. Gabbett does not undertake to say that they did not exist, but that they could not be found.

The broad result of his experiments Dr. Gabbett states to be this: —

"The great majority of specimens of bacilli-containing sputa were from undoubtedly phthisical patients, and the remainder from persons who, in all probability, suffered from the disease; while the specimens of sputa free from bacilli were, as a rule, from cases where the lungs weere either healthy or affected by some totally distinct morbid process. The few exceptions to this latter assertion, and the instances in which the bacilli were repeatedly sought for in vain, and at length found at some later period, lead me to the conclusion that, while the presence of these organisms is, in all probability, positive evidence of phthisis, their absence under certain circumstances does not negative the existence of the disease. In this inquiry pulmonary phthisis was considered as one disease — the disease which, with great variations in its mode of onset and the acuteness of its course, tends to attack both lungs, commences with localized consolidation, passes on to softening and excavation, is attended by the train of symptoms known as 'consumption,' and presents certain common appearances after death."

The circumstances under which bacilli are not found in phthisical sputa are stated to be mainly as follows: (1.) When the patient is directed to cough and expectorate, very commonly the result of the examination will be negative; in all cases for examination it is well to wait for natural expectoration, that is, till the reflex action of coughing is excited by the accumulation of the contents of the bronchial tubes. When the cough is "dry," definite results are not to be expected. (2.) Bacilli are probably not present in the sputum at a very early stage of phthisis before there is any actual breaking down in the lung. (3.) The existence of general bronchial catarrh in a severe form may make it difficult to find the organisms.

If bacilli are found in the sputum the diagnosis of phthisis may be ventured upon, if they are not found its existence cannot absolutely be denied. If, however, they are not found after repeated searches under favorable conditions, in a case where there are definite signs of lung damage, or in a case whose duration would cause such disorganization to be expected somewhere, then one is justified in suspecting that some other than the phthisical process is at work or that the phthisical process has been arrested.

The conclusions that may be drawn from these experiments are thus summarized: —

"(1.) Koch's bacilli occur in the sputa of pulmonary phthisis, acute and chronic, in all its forms.

"(2.) They do not occur in the sputa of other common diseases of the chest.

"(3.) They may probably be found in every case of phthisis which has advanced to the stage of breaking down of tissue.

"(4.) The discovery of very few bacilli in the sputum conveys no certain information as to the gravity of the case. Their occurrence in enormous swarms in all probability denotes excavation."

SOME OLD EDINBURGH SURGEONS.

The addresses which some of the elders of our profession have the ability and the inclination to give regarding their personal experience of long-departed scenes and men often possess a charming quality. The jealousies, the triumphs, the asperities, the eccentricities of these heroes of a former generation come down to us mellowed by the recollection of their aged witnesses with something of the rich flavor of an old vintage. We make no apology for having from time to time outlined for our readers some of these sketches. The latest such record of personal reminiscence of old-time worthies that we have met is in the address by Dr. Alexander Keiller, President of the Harveian Society, delivered at the annual meeting, April 14th. It is devoted to memories of the Edinburgh physicians of fifty years ago, among them some whose names have become world-wide. The address is to be found in the *Edinburgh Medical Journal*. Dr. Keiller speaks from his own knowledge of the "Burke and Hare" matter, which in its time created such a furore. The obtaining of subjects for dissection was a difficult matter, and in the absence of anatomy acts the graveyards were often forced to give up their dead. Popular feeling was strong against the doctors. The carriers of boxes or chests in the vicinity of the University, especially after dark, were apt to be set upon. The cry of "*a shusey! a shusey!*" (vulgate for *sujet*) was always potent to raise a mob, and the porter (though perhaps bearing a perfectly innocent burden) was sometimes beset with such vigor that he might consider himself lucky not to be made a "shusey" himself. Burke and Hare were guilty of the horrible crime of waylaying, stupefying, and suffocating some thirteen victims, whose bodies were sold at £10 to £15 apiece for dissection to Dr. Knox. Hare turned king's evidence, and though Burke was apparently the lesser scoundrel he alone was hung. It was freely charged that Knox was cognizant of the source of his subjects, but no evidence of such knowledge was given. He was the object of great hatred, and was hung in effigy. Burke's body was exposed for two days to popular execration on a dissecting table of the University, and his tanned skin was made into purses which (hear it, ye shades of Tewksbury!) were in great demand, especially among the ladies.

The "field days" for operations in the amphitheatre were Sundays, and the numerous church-going students were wont to attend divine service in a church directly opposite the infirmary, where they sat in a gallery set apart for them. The minister was the most popular preacher in the city, and took a deep interest in the students' professional success. When the infirmary bell was heard, indicating that the operations were to begin, he (perhaps making a virtue of necessity) sat down until the gallery was emptied. The noise of the unceremonious stampede would probably have drowned his voice if he had attempted to continue preaching. "The rush from the gallery of that church," says the writer, "to the pit of the surgical theatre, in order to get a comfortable front seat so as to narrowly see the whole performance, was anything but calculated to increase the earnestness of our devotional exercises or more deeply impress us with the Gospel truths we had just listened to."

Liston and Lizars were the rival surgeons of that day. They gave a conjoint course on operative surgery, and when subjects were scarce there was some competition between them. Lizars was an exceedingly bold operator, and his attempts, even at that early day, in the line of ovariotomy made him very unpopular. He was nick-named "Ovary John," and was freely abused as being little better than a murderer. Yet in spite of abuse and opposition, of which Dr. Keiller remembered to have heard him bitterly complain, he persevered in what he believed would become a means of saving many lives, and is entitled to the honor of being foremost among the practitioners of that operation. Some basis for his butcherly reputation seems to have lain in his operating costume, which was, if not antiseptic, at least antihæmorrhagic. It consisted of a pair of very loose overalls, an old long-sleeved topcoat, buttoned up even beyond the throat, the better to prevent any possible spurting of blood reaching his shirt collar or necktie, which was never of the white choker stamp. His style of operating was very business-like, and his hangman garb was not out of keeping with the sanguinolent appearance customary to that small part of him which was uncovered by it.

Liston was, unlike Lizars, of a very powerful physique. A burly carter was brought into the amphitheatre one day with an unreduced dislocation of the shoulder. An attempt had been made by the other surgeons to reduce it, but had failed on account of the resistance which the fellow had made to every effort on their part. The man was finally led like a wild beast into the ring, when Liston pounced upon him, and at once firmly grasped the immovably dislocated extremity, which he proceeded to pull and twist, while the patient stormed, cursed, fought, and kicked. "Liston, however," says our author, "was quite equal to the awkward situation, and as every kick with dangerous force was launched at him in front, he knew his anatomy too well not to swing round so as to receive them on amply cushioned parts behind, until his own time came to return the madman's blows and imprecations with confounding, and, at the same time, most successful interest; for, while engaged keeping up the extension required to overcome, if possible, the muscular contraction in order to facilitate the reduction aimed at, Liston knowingly and cleverly seized his opportunity, the most precious opportunity in such cases, of staggering the muscles into comparatively flaccid abeyance. Liston, while keeping up the extension with one of his big and powerful fists, and fiercely eyeing his still cursing and kicking surgical victim, loudly exclaimed, 'You d——d scoundrel, what are you swearing at?' and with one momentarily-released mighty right hand struck him a bang between the eyes, when immediately, through Liston's masterly manœuvering, in popped the stubborn joint of the now bunged-up-eyed carter, who obviously failed to

appreciate either the laughter or the applause of the audience."

Liston seems to have had besides the strength of a lion something of that beast's disposition. He resented anything that seemed to compromise his dignity. In one of his summer clinical lectures he was speaking of the tourniquet, and its best and most applicable forms, and then exhibited a specimen which he had newly invented, and the power of which he set about showing on his own person. The instrument was on the principle of an ordinary double-padded hernial truss, with an unusually strong spring. This he managed, by using considerable force, to bend round his enormous thigh so as to reach the region over the femoral artery, and, after showing both before and behind how well the two pads fitted, it caused him no small difficulty in again releasing himself from their firm pressure; and when striving with considerable force to rebend the powerful spring, the back pad got hold of the gluteal region of his thin, light-colored, drawerless trousers, it so extensively gave way as to show, and that in the most bare-hipped fashion, the enormous extent of his lower and posterior proportions, which unlooked-for exhibition could not and did not fail to receive rounds of applause as well as side-splitting laughter. One luckless youth near the lecturer was detected stuffing his handkerchief into his mouth to suppress his laughter. A few days later this young man was invited to hold a limb of a subject which had attained a green old age, while Liston amputated. The latter did not care to touch the limb save with his amputating knife, which, however, played about the fingers of the merry young man till it accidentally drew blood. The youth looked woefully at the surgeon, who laughingly exclaimed, "The more you bleed the better." Whether the young man was right in his opinion that this was done in retaliation for his own ill-timed hilarity was never known, but it is pleasant to learn that a cleverly-drawn water-color of one of Liston's most noted operation cases presented by the young man to the surgeon made the two friends.

Liston and Lizars often had difficulty in getting subjects for their conjoint course, and, it would also seem, in dividing the subjects they did get. Once it was agreed that Liston should have the next one that arrived. It came in a "chest of tea" all the way from Ireland. Lizars knew it was on the way, but said nothing. Liston would not have discovered its arrival had not a mob seen it, and attacked the carrier, who was protected only by the arrival of a constable. Of this part of the story Lizars was ignorant. He told one of the students if Liston came to the building to say that he (Lizars) had gone away, and would not return for some time. Liston arrived to claim his subject, and even while the lying message was being given, Lizars, with incautious haste, peeped over the stairs in his dissecting gown, and said "Is he away?" Of course the cat was out of the bag at once. Liston, with a "You lying little devil," threw the offender over his shoulder, and carrying him up to the dissecting room landed him with a shake in the middle of the floor, to the amusement of the students and of Lizars.

Such a story shows as well as anything the change in public sentiment from a day when such petty tricks could be resorted to between two leading teachers in a great university. So does also the fact, which our author considers not only true, but a matter of no surprise, that Syme *bought* the chair of clinical surgery from its former occupant, Russell, for £300 a year. That is, he paid that sum to have Russell retire at a time when the latter's influence would be able to put Syme, to the exclusion of any of his rivals, into the professorial chair.

We may at some future time give our readers the benefit of more of Dr. Keiller's reminiscences.

TESTAMENTARY CAPACITY.

DURING the last week in April two interesting will cases were contested in our Massachusetts courts. One was that of Cooley Dickenson, and the other that of James Fitzgerald.

An unsuccessful effort was made to break both of these wills, chiefly on the score of mental unsoundness.

The charge of the judge to the jury in each trial was well stated. In the case of Fitzgerald, Justice Field held that: —

A man whose mind is sound can make a will, no matter how feeble his body, but feebleness of body by age, loss of faculties, or disease is to be inquired into for the purpose of throwing light upon the condition of his mind. It is the condition of mind that you are to look at and determine, but you are to take into consideration all the facts in order to determine his mental condition. Of course the condition of a man's mind can only be determined by its manifestations, and it is for that purpose that so much evidence has been introduced, showing what Mr. Fitzgerald said, what he did, what his conduct was, in order that he may be brought before you as far as possible by the testimony; that you may see him as far as you can, and determine by his appearance, his physical condition, his conversation and conduct, what he said and what he did, what the condition of his mind was at the time he executed this instrument. The law makes a distinction between witnesses. Ordinary witnesses can only testify to facts, what they saw and observed; and you have had those before you who have told what they heard Mr. Fitzgerald say, what they saw him do, and have described his appearance as well as they can, but they have given no opinion as to his condition of mind. Some witnesses, in addition to that, are permitted to give an opinion as to whether or not a person was of sound mind at the time they saw him. The attesting witnesses to the instrument, those persons who were present and subscribed the instrument in the presence of the testator, are allowed to give an opinion as to the soundness or the unsoundness of his mind at the time. The family or attending physician is permitted to give an opinion, and experts on insan-

ity are permitted to give an opinion as to the soundness of mind of the person, and also on certain hypothetical questions, whether certain facts would prove mental disease. The weight to be given to this opinion is for you to determine, just as with the other evidence. A man may be insane or subject to certain delusions, or he may be imbecile or idiotic by reason of the decay of the mental faculties. The first you have often seen instances of in madmen; the second in cases of idiots from birth, or persons whose minds from decay have become idiotic, or from disease and old age. It is immaterial what the cause is; it is the condition of mind.

Now, how much mental capacity is necessary in law to enable a man to make a valid will? Well, in general there must be mind enough to understand, in the ordinary sense, what he was doing. [Reads from an authority presented by counsel.] He must have mind enough to understand what he is doing, to know the extent of his property, what his connections are with his relatives and other persons; his obligations and duties to them, if he has any; he must be able to comprehend the scheme of the instrument he is executing, and to understand it. He must be able to understand his relation to persons and property, and to understand the disposition of it. If he has that amount of capacity he is of sound mind within the limits of the statute. If he understands that it is his will, and is capable of understanding what the will is to be, and where the property is to go; if he has such an understanding of the business he is doing, that is capacity enough to make a will. It is impossible to describe these things with mathematical exactness. It is sometimes said that a man must be capable of attending to his usual business, but a man's business may have been large, and the demands for a successful operation of it may have been of the very highest character. He may be able to have a perfectly clear understanding of his property and estate, and a perfect understanding of their condition, but not be able to attend to the ordinary duties of his business. A man may understand and know the extent of his property, and know what disposition ought to be made of it, but he may not be able to make contracts where there are competing interests, and he might be easily over-reached, but still might understand perfectly what his property consisted of, who his relatives were, how he liked or did not like them, and what disposition he wished to make of his property. It is not capacity for doing other business, but it is the capacity to do the business itself, namely, to make a will, and the capacity to understand what he is doing, and what the effect will be. A man may also be unsound of mind by reason of disease, or insane delusions, or insane impulses. It is possible you might think a man unsound to some extent, and yet he might have a certain knowledge of the extent of his property. A man might say that the sun went around the earth, and you might think that this was an insane delusion, and yet possibly not one of you could demonstrate to him that the earth really did revolve around the sun rather than the sun around the earth as he contended, but you still might find him perfectly sane as to his connection with all persons related to him. We all know perfectly well that men differ in opinion on certain questions, and do not draw the same conclusions from the same evidence, that it does not prove the same thing to them. Therefore it is not difference of opinion or eccentricity of behavior that can be said to constitute insanity or insane delusions. It is for you to say whether these were insane delusions or merely differences of opinion, and, in order to be an insane delusion, it must go to the extent of being without rational foundation.

As the ordinary practitioner is liable to be called upon to give expert testimony in cases of mental disease it is important for him to carry in his mind what constitutes insanity under varying circumstances. The above charge makes this clear in regard to will-making.

MEDICAL NOTES.

— A correspondent of the *British Medical Journal* relates the case of a farmer, deaf for many years, in whom the membrana tympani was wholly wanting, who got a grass seed into the affected ear while loading hay. As the seed could be seen with its root end lying innermost the attendant thought that its removal by forceps would drive the barbed fibres into the integument of the canal and cause much irritation. He therefore syringed out the passage, and examination by the speculum failing to show the seed, supposed he had washed it out, but about forty-eight hours afterwards the patient discharged the greater part of the grass seed from the left nostril.

— The initial number of the *American Meteorological Journal*, published at Detroit, Mich., is at hand. This is the first American journal to be devoted to this subject. The first number contains several original communications, besides notes and translations of interest to students of meteorological science. The importance of the subject and the impetus which its study has received of late years are sufficient warrant for the appearance of a journal of meteorology.

— The *British Medical Journal* says that a parliamentary paper issued February 25, 1884, gives the number of lives lost by drowning or other accident in British merchant ships registered in the United Kingdom in the several years from 1871 to 1882 inclusive. In the twelve years the total loss of life was 38,722. of which 35,660 were crew, and 3062 passengers. The largest numbers were in 1873 and 1874, this being mainly due to the great number of passengers drowned in those years, 1167 in the former, and 572 in the latter.

NEW YORK.

— The seventy-seventh annual commencement of the College of Physicians and Surgeons took place at Steinway Hall on May 13th, when Dr. John C. Dalton, President of the college, conferred the degree of M. D. on 105 graduates. Brief addresses were made by Dr. Dalton and President Barnard, of Columbia College, and the principal address to the class was delivered by the Rev. Howard Crosby, D. D. The

Alumni Association Prize of $500, open to alumni of the college for the best essay on any subject in medicine or surgery showing original research, was awarded to Dr. Moses Allen Starr, and the usual prizes to students were announced.

— On the same date diplomas were conferred upon seven graduates of the Training School for Nurses connected with the Mount Sinai Hospital. An essay was read by one of the graduates, and addresses were made by Judge Brady and Dr. E. G. Janeway.

— The corner-stone of the New York Cancer Hospital was laid on the 17th of May by the Rev. William F. Morgan, D. D., rector of St. Thomas' Church. An address was delivered by Dr. William H. Draper, and Mr. John E. Parsons, President of the Board of Trustees, announced that the building about to be erected was the absolute gift of Mr. John Jacob Astor. He said that the fund of the institution now amounted altogether to $360,000, and that it owned twelve city lots of land in addition. The building, which is to be of pressed Philadelphia brick, will have a frontage of 120 feet on Eighth Avenue, and will extend sixty feet on One Hundred and Sixth Street. It will be after the French renaissance style of architecture, and will consist of three circular pavilions connected by a central building.

Correspondence.

INVITATION TO INSPECT THE NEW TECHNOLOGY BUILDING.

138 BOYLSTON STREET, *May* 14, 1884.

MR. EDITOR, — Will you kindly grant space in the columns of the JOURNAL for the following invitation to the physicians of Boston from the Boston Society of Arts, received this day, and greatly oblige

Yours truly, ALBERT N. BLODGETT,
Secretary of Section for Clinical Medicine, Pathology, and Hygiene, Suffolk District Medical Society.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY,
BOSTON, *May* 14, 1884.

DR. A. N. BLODGETT, *Secretary:* —

Dear Sir, — I beg to inform you that at the next meeting of the Society of Arts, to be held on the evening of Thursday, May 22d, at eight P. M., Mr. S. H. Woodbridge, Instructor of Physics in the Institute, will read a paper on The Heating and Ventilation of the New Building of the Institute of Technology, and the Special Principles Involved. The paper will be illustrated by plans of the building, and a full description will be given of the apparatus, together with the results attained, which have proved in the highest degree satisfactory. The Society will, at the close of the lecture, be shown into the new building, where the apparatus will be in operation.

As this meeting will be of interest to members of the medical profession, I have the honor, in behalf of the executive committee of the Society of Arts, to tender to your Society, as a body, a most cordial invitation to be present, and should be greatly obliged to you for any suggestions which will aid me in bringing the meeting to the further attention of medical men.

Very respectfully, GEORGE F. SWAIN,
Secretary Society of Arts.

P. S. You are doubtless aware that the method adopted of warming and ventilating this building is in some degree novel, and presents many points of interest, such as justify considerable interest in the results obtained. Very truly, G. F. SWAIN.

Miscellany.

1884. MASSACHUSETTS MEDICAL SOCIETY.

ONE HUNDRED AND THIRD ANNIVERSARY.

THE annual meeting will be held at nine o'clock A. M., Wednesday, June 11, 1884, in Huntington Hall, at the Institute of Technology, Boylston Street (between Berkeley and Clarendon), Boston. The necessary arrangements have been made for the preceding day, Tuesday, June 10th.

By order of the President, FRANCIS W. GOSS,
ROXBURY, *May* 10, 1884. *Recording Secretary.*

TUESDAY, JUNE 10, 1884.

Ten o'clock A. M. The Fellows of the Society are invited to visit the Massachusetts General Hospital, in Blossom Street; the Boston City Hospital, on Harrison Avenue; the new Children's Hospital, on Huntington Avenue, near West Chester Park; and the Lying-in Hospital, 24 McLean Street.

Twelve o'clock M. At the New Harvard Medical School Building, corner of Boylston and Exeter Streets, the following communications will be presented: Methods of Instruction and Research in Physiology, with Demonstrations, by Prof. H. P. Bowditch. Modern Methods in Anatomy, with Demonstrations, by Prof. Thomas Dwight.

In Huntington Hall. Three o'clock P. M. The following paper will be read: The Plaster Posterior Splint in the Treatment of Fractures of the Leg, with its Practical Application, by G. W. Gay, M. D., of Boston.

Four o'clock P. M. The Society will hold an adjourned meeting, in accordance with the vote passed at the last annual meeting.

Invitation. The Medical Faculty of Harvard University invites the Fellows of the Society to visit the new Medical College, Boylston Street, at five o'clock P. M. The building will be exhibited, and there will be a collation at the service of the guests.

WEDNESDAY, JUNE 11, 1884.

Nine o'clock A. M. The One Hundred and Third Annual Meeting. (1.) Secretary's Record and Report. (2.) Treasurer's Report. (3.) Medical papers and communications: A Case of Chylous Deposit in the Abdomen, by F. Nickerson, M. D., of Lowell. The Pitch of the Percussion Sound, by L. Huntress, M. D., of Lowell. Sanitary Forest-Culture, by J. F. A. Adams, M. D., of Pittsfield. Weight as an Indication of the Character of Risks for Life Insurance, by J. Seaverns, M. D., of Roxbury. Communications from the Reporters of the District Societies. (4.) Introduction of Delegates. (Intermission of fifteen minutes.)

Twelve o'clock M. The Annual Discourse, by John Crowell, M. D., of Haverhill. The hall doors will remain closed during the delivery of the discourse.

One o'clock P. M. The Annual Dinner will be served in the Skating Rink, on Clarendon Street, near Boylston, to which place the Fellows, called in the order of seniority, will walk in procession.

Councilors' Meetings will be held during the ensuing year at the Medical Library, No. 19 Boylston Place, Boston, as follows: (1.) The annual meeting, at seven o'clock P. M., Tuesday, June 10th. (2.) A stated meeting, at eleven o'clock A. M., Wednesday, October 1st. (3.) A stated meeting, at eleven o'clock A. M., Wednesday, February 4, 1885.

The Annual Conference of Censors will be held at 2.30 P. M., Tuesday, June 10, 1884, at No. 19 Boylston Place, Boston.

Censors' Meetings. The Censors for Suffolk District, officiating also for the State Society, will meet in Boston, for the examination of candidates, on Thursday, June 5, 1884, and on the Thursday before the last Saturday of September and of February. But they cannot examine any candidate who is already a resident, or in practice, in any district other than Suffolk. Their meetings will be duly advertised in the *Boston Medical and Surgical Journal.*

In the other Medical Districts the Censors will hold their meetings for the examination of candidates residing in their respective districts, and none other, at the same place and on the

same day as the stated meetings of the District Societies themselves.

Memorandum. The District Medical Societies are simply Sections of the Massachusetts Medical Society, and their composition is determined by geographical considerations. They are not original and independent, but derived and *subordinate*, bodies; authorized to establish rules for their particular government, not repugnant to the By-Laws of the general Society, but "subject to the regulations of the general Society in all matters wherein the general Society shall be concerned."

REPORTED MORTALITY FOR THE WEEK ENDING MAY 10, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Typhoid Fever.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	595	212	20.16	17.82	1.14	5.96	2.68
Philadelphia	927,995	347	102	17.40	15.37	2.87	5.51	4.64
Brooklyn	644,526	208	76	12 48	13 44	1.44	3.36	2.40
Chicago	632,100	223	101	24.08	9.81	2.68	7.58	3.12
Boston	423,800	170	55	35.28	17.64	1.77	4.70	2.94
Baltimore	408,520	149	59	22 78	14.07	1 34	7.37	1.34
St. Louis	400,000	117	31	12.83	9.40	2.66	4.07	—
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	158	71	20.25	12.03	.63	1.26	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	76	34	14.52	14 52	5.28	5.28	2.64
Milwaukee	142,400	49	27	10.20	8.16	—	2.04	4.08
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	33	9	24.24	18.18	—	3.03	9.09
Nashville	54,400	—	—	—	—	—	—	—
Charleston	52,286	—	—	—	—	—	—	—
Lowell	71,447	29	5	3.45	17.25	3.45	—	—
Worcester	69,442	21	5	9.52	19.04	—	9.52	—
Fall River	62,674	16	7	18.75	—	—	18.75	—
Cambridge	60,995	12	4	16.66	50.00	—	—	8.33
Lawrence	45,516	9	3	22.22	44.44	11.11	11.11	—
Lynn	44,895	11	1	9.09	—	—	9 09	—
Springfield	38,090	12	7	25.00	8.33	—	16.66	8.33
Somerville	31,350	5	0	—	—	—	—	—
Holyoke	30,515	3	0	33.33	—	—	—	33.33
New Bedford	30,144	6	1	16 66	16.66	16.16	—	—
Salem	29,503	14	5	7.14	7.14	—	7.14	—
Chelsea	24,347	5	1	—	—	—	—	—
Taunton	22,693	10	3	10.00	—	—	10.00	—
Gloucester	21,400	—	—	—	—	—	—	—
Haverhill	20,905	6	1	16·66	16.66	—	—	—
Newton	19,421	4	1	—	25.00	—	—	—
Brockton	18,323	7	1	—	57.12	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	5	0	20.00	40.00	20.00	—	—
Fitchburg	13,433	4	1	50 00	25.00	25.00	25 00	—
Eighty-three Massachusetts towns	458,584	72	7	8.34	11.12	4.17	2.78	1.39

Deaths reported 2376 (no reports from Cincinnati, Buffalo, District of Columbia, Nashville, and Charleston): under five years of age, 830; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 417, consumption 343, lung diseases 315, diphtheria and croup 121, scarlet fever 65, measles 57, typhoid fever 47, diarrhœal diseases 42, whooping-cough 20, malarial fevers 19, cerebro-spinal meningitis 15, erysipelas 15, puerperal fever eight, small-pox five, typhus fever three. From *measles*, New York 21, Chicago and New Orleans 12 each, Baltimore seven, Brooklyn, St. Louis, Pittsburg, and Milwaukee one each. From *diarrhœal diseases*, New York nine, New Orleans seven, Philadelphia and Baltimore six each, Chicago five, Boston four, Brooklyn and St. Louis two each, New Haven one. From *whooping-cough*, Boston five, New York and Brooklyn four each, Chicago and Baltimore three each, St. Louis one. From *malarial fevers*, New York eight, New Orleans five, Philadelphia and Brooklyn two each, Baltimore and St. Louis one each. From *cerebro-spinal meningitis*, New York four, Philadelphia, Chicago, and New Haven two each, St. Louis, Haverhill, and Fitchburg one each. From *erysipelas*, New York seven, Brooklyn two, Philadelphia, Chicago, Baltimore, St. Louis, New Orleans, and New Haven one each. From *puerperal fever*, Philadelphia three, New York, Chicago, Boston, Baltimore, and Milwaukee one each. From *small-pox*, New Orleans four, Philadelphia one. From *typhus fever*, New York three.

Cases reported in Boston: scarlet fever 48, diphtheria 16, measles four, and typhoid fever two; in Milwaukee, scarlet fever 18, and diphtheria three.

In 100 cities and towns of Massachusetts, with an estimated population of 1,313,531 (estimated population of the State 1,955,104), the total death-rate for the week was 15.88 against 13.67 and 15.63 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending April 26th, the death-rate was 22.3. Deaths reported 3751: acute diseases of the respiratory organs (London) 327, measles 193, whooping-cough 189, scarlet fever 76, fever 40, diarrhœa 30, small-pox (London 12, Sheffield three, Liverpool two, Birmingham, Manchester, Sunderland, and Newcastle one each) 21. The death-rates ranged from 15 in Norwich to 28.4 in Leeds; Leicester 18.1; Birkenhead 18.9; London 21.6; Nottingham 21.6; Bradford 21.7; Sunderland 22; Sheffield 23.6; Birmingham 24.3; Manchester 27.1; Blackburn 27.4; Liverpool 28.1. In Edinburgh 22.2; Glasgow 29.2; Dublin 28.8.

For the week ending April 26th, in the Swiss towns, there were 40 deaths from consumption, typhoid fever 31, lung diseases 21, diarrhœal diseases 14, diphtheria and croup five, whooping-cough three, erysipelas two, puerperal fever one. The death-rates were, at Geneva 15.3; Zurich 27.6; Basle 19.4; Berne 33.3.

The meteorological record for the week ending May 10th in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
May, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean	7.23 A. M.	3.23 P. M.	11.23 P. M.	7. 23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 4	30.122	57	70	43	60	34	61	52	W	W	SW	7	15	10	C	O	C	—	—
Mon., 5	30.017	54	58	50	86	89	96	90	W	N	SW	4	6	5	R	O	F	—	—
Tues., 6	30.078	45	53	43	84	100	86	90	NE	NE	E	12	15	13	O	O	R	—	—
Wed., 7	30.176	43	46	40	76	87	100	88	NE	NE	NE	24	29	20	O	O	R	—	—
Thurs., 8	30.050	41	43	40	100	99	100	100	NE	NE	NE	18	20	12	R	R	O	—	—
Fri., 9	29.812	49	63	40	91	86	98	89	NW	E	SW	7	5	8	O	O	O	—	—
Sat., 10	29.534	55	66	49	93	57	80	77	SW	W	W	7	10	11	O	F	C	—	—
Mean, the Week.	29.973	49	57	43				84										42.00	0.83

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MAY 10, 1884, TO MAY 16, 1884.

WATERS, WILLIAM E., major and surgeon. Ordered to report for temporary duty to the commanding officer at Plattsburg Barracks, N. Y. Paragraph 4, S. O. 90, headquarters Department of the East, May 10, 1884.

HUBBARD, VAN BUREN, major and surgeon. Relieved from further duty at Fort Stanton, N. M., and ordered to Fort Bayard, N. M., for duty. Paragraph 3, S. O. 96, headquarters Department of the Missouri, May 12, 1884.

MOSELEY, E. B., captain and assistant surgeon. Assigned to temporary duty at Vancouver Barracks, Washington Territory. Paragraph 6, S. O. 59, headquarters Department of the Columbia, May 8, 1884.

WILCOX, TIMOTHY E., captain and assistant surgeon. Assigned to duty at Washington Barracks, D. C. Paragraph 2, S. O. 90, headquarters Department of the East, May 10, 1884.

WALES, P. G., first lieutenant and assistant surgeon. Assigned to duty at Old Fort Colville, Washington Territory, until further orders. Paragraph 3, S. O. 58, headquarters Department of the Columbia, May 7, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 17, 1884.

KINDLEBERGER, D., medical inspector, to be fleet surgeon of Pacific Station.

LEACH, PHILIP, assistant surgeon, detached from U. S. S. New Hampshire and ordered to Naval Hospital, Chelsea.

BERTOLETTE, D. N., passed assistant surgeon, detached from Naval Academy and ordered to Practice Ship Dale.

MASSACHUSETTS MEDICAL SOCIETY. ANNUAL CONFERENCE OF CENSORS.

THE annual meeting of the Censors of the Massachusetts Medical Society will be held at 19 Boylston Place on *Tuesday, June 10, 1884*, at *2.30 o'clock*. The several District Societies are earnestly requested to send a full representation by delegates to this meeting, as matters of general interest are to be presented for discussion.

ALBERT N. BLODGETT, M. D., *Secretary*.

AMERICAN NEUROLOGICAL SOCIETY.

NEW YORK, *May* 16, 1884.

DEAR SIR, — The Tenth Annual Meeting of the American Neurological Association will be held in this city June 18th, 19th, and 20th. Papers have been already promised by Drs. Putnam, Walton, and Webber, of Boston, and Drs. Seguin and Rockwell, of New York. R. W. AMIDON, *Acting Secretary*, 18 West Twenty-First Street.

OBITUARY.

DR. CHARLES H. HILDRETH, of Gloucester, died suddenly, Sunday, May 18. He was called to breakfast about eight o'clock, and, not responding, was found sitting on the bed partly dressed. He said, "I am dying," and remained unconscious until his death, at eleven o'clock the same morning. He was in his fifty-ninth year, was a son of the Rev. Hosea Hildreth, a former pastor of the First Parish Church, brother of Richard Hildreth, the historian, and the last of his family. He was a graduate of the Harvard Medical School in 1851, and practiced for a time at Deer Island. He had a large practice in Gloucester, where he has resided nearly all the years of his professional life. He was a member of the Massachusetts Medical Society since 1853. At one time he was surveyor of the port. He was a man of much public spirit, greatly interested in schools and educational interests, served many years on the school committee, and was a member of the Board at the time of his death. He leaves a widow and one son.

DIED. — In Danvers, Mass., May 1, 1884, Edgar O'Meara Fowler, M. D., M. M. S. S., aged thirty-five years.

BOOKS AND PAMPHLETS RECEIVED. — The Pedigree of Disease. Being Six Lectures on Temperament, Idiosyncrasy, and Diathesis, delivered in the Theatre of the Royal College of Surgeons in the Session of 1881. By Jonathan Hutchinson, F. R. S. London: J. & A. Churchill. 1884.

Claims of the Sick Poor. Paper read before the Middlesex North District Medical Society. By Nathan Allen, M. D. Lowell. 1877.

The Refraction of the Eye. A Manual for Students. By Gustavus Hartridge, F. R. C. S., Assistant Surgeon Royal Westminster Ophthalmic Hospital. With Eighty-Seven Illustrations. London: J. & A. Churchill. 1884.

Fifty-Fourth Annual Report of the Inspectors of the State Penitentiary for the Eastern District of Pennsylvania. 1883.

State Board of Health of New York. Report on the Unsanitary Condition of the Village of Bath, and Remedies Therefor.

Eleventh Annual Report of the Board of Health of the City of New Haven. 1883.

Therapeutische Notizen der Deutschen Medizinal-Zeitung 1880–1883. Herausgeber Dr. Julius Grosser. Berlin: Verlag der Deutschen Medizinal-Zeitung.

Reports of the Executive Committee, Physician, Treasurer, and House Committee of the Sea-Shore Home for the Summer of 1883. Boston. 1884.

Clinical Lectures on Mental Diseases. By T. S. Clouston, M. D. Edin., F. R. C. P. E., etc. To which is added an Abstract of the Statutes of the United States and of the several States and Territories relating to the Custody of the Insane. By Charles F. Folsom, M. D. Philadelphia: Henry C. Lea's Son & Co. 1884.

Tragbahre auf Federn und Unterlegellatten. Separat-Abdruck. Berlin. 1884.

Transactions of the New York Medico-Chirurgical Society. 1883. Vol. III.

Lectures.

LECTURE IN THE COURSE ON TOPOGRAPHICAL ANATOMY.[1]

BY THOMAS DWIGHT, M. D.,
Parkman Professor of Anatomy at the Harvard Medical School.

A NEW DEMONSTRATION OF THE AXILLA.

TO-DAY, gentlemen, we begin the region of the shoulder and axilla. In the shoulder I will call your attention to some points that have already been more or less noticed — points that may be felt. You know that we can feel at the outer side the acromion overlapping the end of the clavicle and making the prominent point. I spoke last time of the motions between these parts, and now that there has been more uncovered I may be able to show them better.

You see a long pin driven into the outer extremity of the clavicle and one into the acromion near it. You see that as I move the shoulder back there is a distinct motion between the pins. When I press upon the clavicle so as to hold it fixed and raise the arm I get some little movement between the two, but without that I get less, and in general there seems to be a very slight movement up and down. If, however, I carry the arm back and upwards at the same time, you then see a much freer movement between the two.

Below is the prominence of the humerus, which is not the head, strictly speaking, but the tuberosities. You must remember that these tuberosities are in life by no means so distinct as in the bone, because the deep groove which separates them is filled up by the long head of the biceps. The more prominent tuberosity is the outer one — the inner is placed anteriorly. You know that if we place any plane surface — a book for instance — at the side of the arm when the arm is vertical we cannot touch the edge of the shoulder-girdle if the head of the bone is in place. It is said that the groove between the tuberosities can be felt, but I think pretty unsatisfactorily, in the living subject. By deep pressure at the inner side of the head you can feel the coracoid process. On this side, where the dissection of the last time has been carried rather farther, I can show you from the base of the coracoid process these two parts of the coraco-clavicular ligament, the trapezoid and the conoid. This one outer and anterior is the trapezoid; the other posterior and internal, the conoid. Between them is a small synovial bursa. As this anterior one runs upward and forward it is easy to understand that this is the one which limits forward motion of the clavicle, because as the clavicle goes forward it carries its upper attachment away from the other one. The converse is true of the conoid. Looking now at the back, before we go any farther, I will call your attention first to the great thickness of the skin, which depends, not upon the subcutaneous tissue, as in some parts, but upon the thickness of the derm proper. Here it is that Dr. Warren discovered his fat canals. You can easily see how exceedingly thick that is. You can contrast it with the delicate skin on the front. Beneath is subcutaneous tissue which has been removed. Here you see the deep fascia which binds down the parts in the region of the shoulder very closely. By this line you make out the posterior border of the deltoid, and you see that this fascia which I cut at its posterior edge is continued over the outer surface of the muscle that I am cutting, which of course is the infraspinatus. The fascia splits into one, the denser, layer going over the deltoid, and into another following the infraspinatus. The supraspinatus also has a pretty well-marked fascia, and this accounts for the pain felt in these parts when they are distended.

The deltoid seen on this side is, perhaps, a larger muscle than we are at first inclined to imagine, coming from the outer third of the clavicle and about all the spine of the scapula. It is made up of very coarse fibres, and these are arranged so as to run for the most part towards a tendon which before its insertion is made up of three or four radiating bands of fibrous tissue. In the middle part of its origin, that is, from the acromion, the muscle arises by means of a number of fibrous bands, from either side of which there go off muscular fibres that are again inserted into the divisions of the final tendon so that the extent of origin is very much increased.

It presents a general resemblance in the coarseness of its fibres to the gluteus maximus. This muscle raises the arm, but, as I have shown you on the living subject, this movement is by no means so simple as we have supposed. It has been generally taught us, or at least we have been led to infer, that when the arm is raised outwards it is brought to a horizontal position by the deltoid and then the movement is continued by the muscles moving the scapula. In point of fact, as Mr. Cathcart, of Edinburgh, has shown, the scapula takes a part in the early stages, and even in the latest there is motion between the arm and the shoulder girdle. This is an instance of the advantage of the live model. The supraspinatus, which is supplied by the same nerve as the deltoid, helps also in raising the arm — it is not merely an external rotator.

I have here a demonstration of the axilla, and incidentally one of the shoulder, that I hit upon some years ago, and as far as I know it is new, that is, inasmuch as it concerns the axilla.

The deltoid having been laid bare, a V-shaped cut is made over the outer aspect of the shoulder and the flap turned up. The capsule is then divided close to the humerus, and that bone sawn through at the lower end of the axilla. The parts in the bottom of this cut are slightly cleaned, the bone then fastened on to the shaft, and the flap replaced. We now turn up the deltoid and show the humerus. If the dissection had been made before you so that the parts should be perfectly fresh, you would see a glairy space over the bone between the periosteum and the areolar tissue of the under side of the deltoid. You get some hints of it in the glistening appearance of the lower fibres, which show a large synovial bursa which is continued under the acromion. (See how the acromion hangs over the joint.) This bursa is one of many in this region.

You see here the head of the bone, or, more accurately, you see its greater tuberosity — the one with three facets. Here is a groove which I can follow now very distinctly, in which rests the long tendon of the biceps. Almost directly in front I feel the lesser tuberosity, and as I put my finger around I feel the smooth surface of the head of the bone. This long head of the biceps going in this deep groove of course does a great deal towards holding the bone firmly. Let us consider incidentally the action of the muscle. The biceps bends the arm, and therefore we infer illogically that if the arm is not bent the biceps

[1] Delivered March 27, 1884. Reported verbatim by Messrs. Pomeroy and Smith of the Harvard Medical School, and revised.

is doing nothing. Imagine the arm thrown forward as in fencing or boxing, and although certain muscles of the chest throw the upper arm forward and the triceps extends the elbow so that the arm is not in the least bent, nevertheless the biceps is in firm contraction, and one object of that is that this long head being made tense keeps the arm perfectly firm in this position, so that it cannot rotate nor "wabble" to one side or the other. Here is the capsule, and in that are the insertions of the supra and infraspinati, the teres minor, and the subscapularis. It is well to point out how very high up these extend over the head of the bone. The external rotators are closely united to the capsular ligament, but can be separated by careful dissection. Not so this one which can be seen on the inside, going to the lesser, internal tuberosity, the subscapularis. It is perhaps an exaggeration to say that it perforates the capsule, but it is so intimately connected with it that if you pass around from the inside of the synovial membrane you see unmistakable signs of its tendon, and there is beside it a bursa which very frequently communicates with the joint. That being opened we see here the cavity of the joint, and in this case you see something that is not seen every day. It is, no doubt, abnormal, but still it is something that may occur. It probably occurs more frequently than we are aware of. I refer to the way in which the capsule is inserted into one side of the glenoid cavity. This shallow cavity is deepened, as you know, by the glenoid ligament, which is a band of fibro-cartilage continuous above with the long head of the biceps and passing around the joint. From the outside of that we have the outer part of the capsule arising, but, according to some authorities, on the inside the capsule arises not from the edge of this but outside of it, that is, away from the middle of the joint. Sometimes it rises a quarter of an inch or more, or, according to Morris, it may be as far out as the base of the coracoid process, so that all this part to the inner side of the head and neck of the scapula is really inside the cavity of the joint, and that is precisely what occurs here. The capsule on the inner side has not been destroyed, and I put my finger here upon the synovial membrane and carry it far along to the inner side of the glenoid cavity and carry it up to the base of the coracoid process, and am still in the undisturbed synovial cavity.

I would call your attention once more to the front of the humerus. You see a part of the long head of the biceps, which was cut both above and below, left in this gutter, where it is surrounded by a prolongation of the synovial membrane, as you see when I remove the tendon.

Now we pass down to the consideration of the axilla. The axilla, which I will show you presently on the other side in the usual classical way, is generally described as a pyramidal cavity, bounded in front by the pectoral muscles, behind by the scapula or the subscapularis lining it, and the borders of the latissimus and teres major, on the inside by the chest covered by the serratus anticus, and on the outside by the humerus with the coraco-brachialis and biceps. When handsomely dissected in that way it is a pyramidal cavity without any base to the pyramid, and consequently you have no guide to the relative distances from the surface of those structures which you see passing through it like telegraph wires. It is a handsome dissection, but the view is false anatomically.

It occurred to me that this might be obviated, and a view given which would be useful in some ways if we were to approach it from the other side in the manner described. In this case the bone has been divided a little above the lower border of the axilla, the cut running through the middle of the insertions of the latissimus and teres major. That being done we pull out the head of the bone, and now we look at the axilla from above. We see no pyramidal space; we see simply the reverse of the skin and fascia from this side, and here I have between my thumb and finger the bundle of arteries, veins, and nerves. The skin is closely adherent to the fascia so that it cannot sag out of place. At the last lecture I pointed out the continuity of the fascia with that of the neck, and mentioned how a process of it has been termed the suspensory ligament of the axilla.

Now let me return to the classical description of the axilla.[1]

We now return to the view from behind. Showing you once more the capsule that has been cut and reflected, I now pull out here from the front of the scapula the subscapular muscle, and you see distinctly how the vessels and nerves rest upon its anterior surface. Lower down I show you the cut ends of the latissimus and teres major. And here in this bundle of vessels and nerves one white band is particularly evident, and that is, of course, one of the posterior branches of the plexus, the great musculo-spiral. From it is given off a nerve which runs inward to accompany the ulnar nerve, and which has the peculiarity of running down in its sheath without any interchange of fibres until it gets near the elbow. Here is an artery which is shown remarkably well, namely, the posterior circumflex, and beside it the circumflex nerve. They come out above the long or scapular head of the triceps so as to curve around the neck of the humerus to appear at the outer side. Here they are quite undisturbed until they were cut after they had made the circuit and reached the posterior surface.

The veins can be seen very well, and by pushing them apart we may see the artery, and to the inner side I get the ulnar nerve. The internal cutaneous is farther in front, and I doubt if I see it in this dissection, but here, very prettily shown, are one or two little nerves at the under side of the axilla, close above the fascia, branches, no doubt, of the intercosto-humeral nerve. Deep in is the artery. You may see it as I press upon the skin below and bring it out. And pushing these veins aside we come to a nerve lying on its outer and anterior surface, that is the median. Without any particular trouble another nerve can be made out at the outer side which plunges at once into the muscle, that is the external cutaneous. Pressing this a little aside you see a strong fascia, the axillary fascia, and in it can be seen clear white fibres which seem to strengthen it in a transverse direction. I press this upwards with my fingers, and have once more the whole bundle of vessels and nerves between my thumb and finger, and as I put up the arm you can see just where they are at the lower part of the axilla. They lie somewhat nearer the anterior than the posterior fold, and are felt along the line of the biceps and coraco-brachialis. The merit of this demonstration consists in showing the floor of the axilla, and above these important structures with their relations almost undisturbed.

[1] See text-books.

It seems to me that possibly it would be well for me now to cut through the joint between the acromion and the clavicle, then passing the knife underneath, above the coracoid process, to divide the coraco-clavicular ligaments, and then the muscles attached to the coracoid process. I next turn the scapula back, and am able to give you a freer view of the same thing, though the relations are no longer undisturbed. Here you see one very large vein and here another which lie on the two sides of the artery, and rather behind it, so much so that I am inclined to suspect that there is a third, the real axillary, in front, and that these are two large venæ comites. The arrangement is an irregular one. You can see here more clearly the first nerve, the musculo-spiral, and cutting now these veins you see below them here the artery, and pressing it aside we see the median nerve close to it. Here is the ulnar farther to the inside; here some branches of the intercosto-humeral; the internal cutaneous here; and, indeed, here is the lesser internal cutaneous. It is worth while now to look up from this space towards the neck, and see the areolar tissue, which is the fascia, plus fat, which follows these vessels. That can be seen in these plates from Braune's frozen sections.

I have one other experiment to show to-day, and that is to exhibit the action of the coraco-clavicular ligaments. The first thing that you notice on cutting them on the other shoulder is the falling of the arm. That is, of course, natural, — that the coracoid should fall down when its attachments are severed, — but I fail to see that the amount of movement in a horizontal plane is materially changed. In a vertical plane it is distinctly increased, for you remember we found before it was exceedingly slight, now it is much better marked.

Address.

EXTRACTS FROM THE ADDRESS AT THE ANNUAL MEETING OF THE PENNSYLVANIA STATE MEDICAL SOCIETY.[1]

BY HENRY H. SMITH, A. M., M. D. U. P., PRESIDENT.

SHALL PENNSYLVANIA HAVE A STATE BOARD OF HEALTH?

The creation by *our* Legislature of a State Board of Health, whose duty it shall be to supervise and recommend such measures of drainage, water supply, etc., as will promote health and ward off disease, is a question that has often been discussed in this Society. During the past ten years this object has been strongly urged by many of our most valuable and energetic members, who have freely given their time and money to secure a proper law for this purpose.

Although they have repeatedly failed in convincing our law-makers of the importance of such a bill for the public good, may we not hope that, like the mythical Antæus, they will receive new strength each time they are cast down on the legislative grounds? The cause of these repeated failures is variously explained; but the main reason is that suggested by our Committee on Medical Legislation, namely, the ignorance of our people in regard to the importance and utility of such a law.

[1] Concluded from page 483.

The organization by this Society of the proposed "Pennsylvania Association to secure a State Board of Health" will probably do much towards creating judicious public sentiment. Let each county society make arrangements to hold several meetings of citizens before the next session of the Legislature, at which brief papers may be read by its members, and speeches made by the local lawyers, divines, and prominent candidates for public office; or let special speakers be invited from other sections to address a meeting for such a purpose, and the public will soon become aware of the necessity of a State Board of Health to protect their own interests. Let each county society urge the introduction into their schools of instruction in the elements of human physiology, and each child will soon introduce the subject of the lesson to each family and knowledge will be extended. Let health tracts be widely distributed through every avenue of trade or travel. Let the masses be made to understand by these means, and especially by public meetings, that it is *their* welfare that is sought, and not that of the medical profession, and *they* will influence the candidates for office. The Latin proverb says, "Docendo disces" — by teaching others you are taught; and as he who teaches also learns, he will probably be the more impressed with the importance of legislative action for a State Board of Health.

Teach every one the importance of a Board to regulate such general sanitary measures as the heating and ventilating of large buildings, especially factories, public halls, and schools; the proper means of removing excreta; the prevention of the spread of small-pox, scarlet fever, diphtheria, whooping-cough, etc., so that children and others residing in infected localities shall not be allowed to attend funerals, come to schools, or otherwise be brought in contact with those who are well.

Let there be an inspection and regulation of vaccine farms, now that competition is rendering bovine virus in some instances dangerous. Let there be such an inspection of food and medicines, particularly the "artificial foods" of infants, as is given every sailor and soldier by our government laboratory at Washington. Let the farmer especially be made to realize that it would be the duty of a State Board of Health to protect his stock against the extension of hoof and mouth disease, pleuro-pneumonia, glanders, or hog and chicken cholera. Let every one be taught that the object of such a law is the appointment by the Governor, with the sanction of the Legislature, of such a capable board, not all physicians, but containing lawyers, sanitary engineers, and other citizens, as may be proved by the nominations of organized scientific institutions or local boards of health to be capable of executing this important trust. In the interval that elapses before the next session of our Legislature the mere circulation of such information would do much to create a sound popular sentiment on this question, especially if our collegiate faculties and school teachers are invited to aid us in instructing all in the laws of hygiene and the necessity of enforcing them by legal statutes.

The wording of such a bill as might become a proper law is a matter demanding very careful consideration. In drawing it, as has been well shown by Dr. Foster Pratt, of Michigan,[2] "experience teaches the importance of careful determining in advance what and

[2] MS. of Dr. Pratt.

how much power you can induce your Legislature to grant."

"The practical question," says Dr. Pratt, "in the beginning of such attempted legislation, is not so much what you would like to have as what you can get. It is easy to defeat a measure by asking too much." Experience also shows, according to Dr. Pratt, "that you are sure to defeat your movement by asking for legislation that recognizes only *regular* physicians."

"Those of us who are sincerely and unselfishly desirous of promoting the sanitary interests of the public cannot too soon, nor too fully, recognize one fundamental fact, that under our form of government a *State medicine*, direct or implied, is as impossible as a *State religion*, and that all denominations of practice, like all denominations of religious belief, are and must be equalbefore the law."

The Judicial Council of the American Medical Association have also decided "that in questions of legislation and governmental policy, on which every physician as well as citizen must be allowed full liberty of opinion and expression, a conference with homœopathic or irregular practitioners is not a consultation at the bedside as contemplated in the Code of Ethics."[1]

Dr. Pratt's experience and success in obtaining legislation on this question, and his study of the subject in various States, make his opinion very valuable, and I commend it to your careful consideration. . . .

THE METHOD OF INFLICTING CAPITAL PUNISHMENT.

It may not be inappropriate in connection with the subject of State Medicine also to call attention to the propriety of memorializing the Legislature to modify the present mode of capital punishment and make it correspond with the scientific progress of the age.

Without discussing the necessity of such punishment we may justly urge, that as its main object is the removal from society of those whose lives are detrimental to its best interests, this should be accomplished in the least painful manner, and it does seem as if death by means of electricity should at present receive due consideration.

It has frequently happened in the incautious handling of wires connected with electric lights, etc., that instantaneous loss of life has ensued, and it is not surprising that the inventive genius of our people should have already suggested the application of electricity to executions.

I feel, therefore, that I advance the cause of humanity when I direct attention to this subject with a view of obtaining legislative sanction.

The history of the invention is as follows[2]: —

"Mr. H. B. Sheridan, of New York, applied last year for a patent on what he termed 'An improved device for executing criminals condemned to death,' and proposed to assign the right to use his invention to the United States Government.

"His apparatus, he says, causes instantaneous death, without pain to the criminal and without disfiguring his body.

"It consists of an ordinary arm-chair, with legs containing some substance that will *insulate* the body of the chair from the floor. The arms end in two brass knobs, on which the hands of the criminal will rest, and the chair has a foot-rest in which is fitted a brass plate. The back of the chair is as high as a man's shoulders. At the top is a small knob with a hole for a peg. The *positive* wire of a dynamo-electric machine running up the back of the chair ends in the knob. The *negative* wire runs to a resistance coil under the chair and thence to a brass plate in the foot-rest. Another *positive* wire runs to one of the brass knobs on the arms of the chair, and a second *negative* wire to the other knob. These wires can be connected with a dynamo-machine, miles away, by conducting wires.

"The chair may be used in two different ways, as the two sets of wires are not operated together.

"If the foot-rest wire is used, some previous preparation is needed, and a small silken collar is fitted tightly on the neck of the criminal. This has on the inside, at the back, a small brass button which fits closely against the spinal process. This is connected with a small silk cable which hangs down loosely and ends in a brass peg. This collar being put on the criminal in his cell, he is then brought out in his bare feet and seated in the chair. Straps fasten his arms to the arms of the chair, and his legs to the chair legs. The brass peg of the silk cable is inserted in the hole on the brass knob at the back of the chair, and is there held by a screw. The bare feet of the criminal rest on the brass plate of the foot-rest, and the circuit would now be complete were it not that the positive wire is broken at a short distance from the chair, but connection can be at once established by turning a switch or pressing a button. When this is done the full charge of electricity enters the criminal's body at the spinal cord and passes out at his feet, the resistance coil which it meets under the chair increasing its force and preventing it from injuring the dynamo-machine on its return; the criminal being killed instantaneously and without pain, as the electricity acts much more rapidly than the nerves of sensation.

"The second method of using the chair is to discharge the current into the palms of the hands through the large brass knobs. In this case no collar is needed, and the criminal need not be barefooted. In either case all the wires and apparatus excepting the small collar would be out of sight, and the criminal would see nothing but an ordinary chair. The sheriff can signal the executioner to turn the switch or he can press a button on the floor, and in a second all would be over."

Mr. Sheridan says he does not wish to make money out of this machine, but has invented it solely in the interest of humanity, and thinks there is no possibility of its failing to do its work quickly and well. Should his suggestion recommend itself to the approval of the Society, it remains for you to urge the passage of such a law as will justify its use as a substitute for hanging. . . .

In reverting to the work done by our Society, and comparing the present with the former condition of the profession, it is instructive to note, that whilst the great aim of the Society is yet the improved treatment of disease, and the elevation of the standard required for a medical diploma, our opinion of what is most feasible in the latter is the fruit "of the association of kindred spirits in the development of one great purpose."

[1] Transactions American Medical Association, vol. xxviii., 1877, p. 60. Minutes of Judicial Council.

[2] Philadelphia Evening Telegraph, May, 1883.

— A professional correspondent seeks information as to the effects, injurious to health, if any, of roller skating.

Original Articles.

SOME OF THE DANGERS AND DISADVANTAGES OF ANÆSTHESIA.[1]

BY DAVID W. CHEEVER, M. D.,

Professor of Surgery in Harvard University, Surgeon to the Boston City Hospital.

THE form of anæsthesia considered in this paper is that produced by the inhalation of sulphuric ether. Unconsciousness of pain in surgical operations is the greatest boon bestowed on man.

What victim of surgery who, under ether, sinks into a calm and dreamless sleep during which his abdomen can be cut open, his bowels taken out, handled, and replaced, his nerves cut, his veins or arteries tied, and his skin sewed up, and who wakes so absolutely oblivious as to ask "Are you not ready to begin?" but concedes with gratitude on realizing the result that this is the greatest discovery ever made for the happiness of mankind? Speed of locomotion, electric transmission of speech, the preservation of the printed thought of all the centuries seem at such a moment small in comparison.

Any one about to suffer the agony of an amputation, who was told that if he would take a considerable risk in breathing ether he should feel nothing, would choose the risk and the oblivion.

But the second great quality of this Letheon is that it is almost free from danger. Deaths from ether are rare. Having used it for twenty-six years I have never seen one. The largest statistics give one death in 23,204 cases.

It would take a long list to exhaust the benefits ether has conferred on surgery. The domain of justifiable and beneficent surgery has been greatly enlarged by anæsthesia. The patient seeks an operation with but little dread. He is operated on earlier and better. Many conservative operations are now done which could not be thought of before ether. Many examinations and diagnoses can be made with it which could not be made without it. Many simulators and malingerers are detected under its potent spell.

These vast advantages and this wonted safety have masked the disadvantages and obscured the dangers which may arise.

Ether can kill, and there are operations which can be better done without it.

Hitherto all that I have said is trite and axiomatic. It is the object of this communication to point out what is the danger and what the disadvantage in breathing sulphuric ether.

(1.) The danger in breathing ether is chiefly from impeded or failing respiration. The heart outlasts the lungs. Suffocation, or coma at the breathing centre, are the causes of death. Temporary paralysis of the palatine muscles causes the stertor or snoring respiration, and the falling back of the *tongue* carries with it the epiglottis, and closes the larynx. When this condition threatens the operator opens the mouth, and perhaps draws forward the tongue. When, however, he sees the tip of the tongue out to the incisor teeth he thinks it safe, but in this he is mistaken. The tongue in this position still blocks the entrance of air on account of the falling of the palate, and it is only when the tongue is forcibly drawn out of the mouth that the air-passage is opened, and suffocation averted. The larynx can also be opened by placing from behind the two thumbs under the angles of the lower jaw and pressing forwards. The muscles of mastication being relaxed the jaw subluxates over the *eminentia articularis* or, rather, on to it, and carries forwards the tongue, and with it the epiglottis, and thus opens the larynx, the mouth being already open.[2]

(2.) In some persons, and we cannot foresee in whom, the mucous membrane of the throat and air-passages is very sensitive to the irritating fumes of ether. This sensibility first shows itself in croupy respiration, a spasmodic stridor followed by an incessant dry cough. Letting in more air relieves the spasm of the glottis, and the narcotism of more profound etherization soon quiets the tickling cough. In many persons there soon follows a new peril from a great *secretion of frothy mucus*. The mouth, pharynx, and nares bubble with fluid, and soon the same oversecretion pours out in the bronchi, fills the air-passages, and finally approaches a capillary bronchitis. Slow lividity ensues, the arteries spout venous blood, and the patient is on the verge of suffocation, drowned in his own secretions. This is a very tiresome complication. Etherization has to be entirely suspended for a considerable time.

(3.) Tetanic symptoms are often annoying, and if not relieved by appropriate treatment become dangerous. Obstinate pronation of the fore-arm and wrist, inversion of the thumbs, opisthotonos, boring by boring the head back in the pillow, these are evidences of suffocation, and are relieved by removing the ether, and allowing of a few inspirations of air. Once I saw this condition in a child terminate in a convulsion, which, however, was not fatal. A most dangerous complication is *tetanic setting of the inspiratory muscles of the chest.* No air enters; respiration with the diaphragm fails to fill the lungs, and the patient dies as in true tetanus. I once saw this condition in a middle-aged man. It came on instantly without warning. The mouth and larynx were free, the tongue out, the position good. Respiration absolutely ceased, but the pulse continued. Artificial respiration, forcibly, by the Sylvester method, restored the breathing, and the chest again inspired. In this case there was no stridor at the glottis. The operation was continued and completed without ether, and the patient recovered well. This condition must not be confounded with that where the diaphragm is seen laboriously pumping on a collapsed lung, the glottis being closed by the tongue or by spasm.

(4.) *Simple exhaustion* is another source of danger in anæsthesia. Death may occur from slowly failing respiration, so gradual as not to attract notice. Such a case of threatened death from pure debility occurred to me where a feeble woman insisted on an immediate operation for the removal of a cystic tumor of the breast. Sulphuric ether was inhaled quietly, and complete anæsthesia produced, without spasm, frothy secretion, or lividity. The breathing was especially quiet, but both diaphragm and intercostals were working, the mouth open, and the tongue out. After several imperfect sighing respirations a deathly pallor spread over the face, ears, and neck, the pupils dilated, the

[1] A paper read before the American Surgical Association, April 30, 1884.

[2] The relaxation of the muscles in complete anæsthesia being similar to that in death the manœuvres to open the larynx were illustrated by the reader on a wet preparation of the head and neck of the *cadaver*, of which appropriate sections had been made by Dr. Thomas Dwight, professor of anatomy in Harvard University.

jaw fell, the breathing ceased. The pulse continued beating very feebly. The aspect was that of death. Artificial respiration and stimulation restored life. The tumor was removed without ether, and the patient evinced no consciousness until the sutures were being passed. She made a slow but good recovery. A momentary inattention on the part of the surgeon and assistant would have insured a fatal result. A second case like the above occurred to me in operating for a tumor of the jaw. The fauces were free of blood and mucus; there was no obstruction, but breathing gradually ceased. This patient was restored by artificial respiration, and did well. The latter case was being operated on in a chair, and faintness may have contributed to the result, but the former case was lying in an easy position on her side in bed. In neither case was there evidence of pulmonary or cardiac disease.

(5.) *Disease of the heart* may cause death during the inhalation of ether. Well marked valvular disease, pericarditis and effusion, or a fatty and feeble heart, may contribute to a fatal result, and yet I have repeatedly etherized patients with valvular disease with safety by using caution, and giving them plenty of time. Sulphuric ether is a stimulant to the circulation, and if given slowly, well mixed with air, and not pushed either to lividity or exhaustion, may be given safely in many cases of heart disease.

A middle-aged man was brought into the hospital with retention and urinary extravasation. Immediate incisions and perineal section were imperative. He was etherized, and as I was about to cut breathing ceased. The pulse stopped also. Artificial respiration and stimulation revived him. The operation was done without ether. He lived ten days. At the autopsy I found extensive and old valvular disease of the heart.

(6.) *Apoplexy*, sanguineous or serous, may follow the coma of etherization in the old, or in drunkards. Atheromatous vessels may give way under the great congestion produced by full anæsthesia; and the "wet brain" of alcoholism may succeed the stupor of ether.

Having reviewed the dangers, we now pass to the disadvantages of anæsthesia.

Does etherization diminish shock?

Primary shock it does lessen. It removes apprehension, and it annuls pain. But it does not remove the secondary shock which follows an operation. Etherization is primarily stimulating, and acts like alcohol in enforcing the heart and filling the pulse.

Secondarily, or long continued, it is exhausting. Long etherization prostrates the patient. A frequent pulse, lowered temperature, drenching sweats, and nausea are the sequences of an anæsthesia which lasts more than from half an hour to one hour.

(7.) One of the marked *disadvantages* of anæsthesia is that it decoys the *operator* into *delay* and *slowness* in his work.

Before ether the skill of the surgeon was estimated by his celerity. A good operator was a brilliant and a quick one. The agonies of the patient enforced haste. Every means was used to shorten his suffering. Now all is changed, — largely to the surgeon's comfort, largely to his increased care and prudence, and as largely to delay, to deliberation over the steps of an operation, and to a too cautious and sometimes puttering execution. The patient may benefit by greater skill and by more conservatism; but he suffers from prolonged exposure, tedious narcotism, greater secondary hock.

(8.) Drunkards and steady drinkers succumb slowly to the narcotism of ether. They pass through a long period of excitement and delirium before they get the sleep; they have an equally long and violent delirium on coming out. They are subject during etherization to *persistent* and *recurrent tremors*, which delay an operation or jeopardize its safe execution. It is frequently not until the surgeon has finished that they become quiet and narcotized.

(9.) *Vomiting* and *lasting nausea* are among the disadvantages of etherization. The larger proportion of patients vomit during anæsthesia or after it, or both. This is especially disastrous in abdominal sections, in operations for hernia, and in section of the cornea and iris.

Vomiting during the operation may expel the vitreous humor. Vomiting after an operation I have seen extrude a strangulated intestine anew into the hernial sac. Vomiting after an operation equally is liable to disturb the stump of an ovariotomy and bruise peritoneal and omental adhesions, or, in an amputation, to burst the congealed mouths of small vessels, and lead to secondary hæmorrhage under the flaps of a stump. Nausea may last two days, and may turn the scale against successful rallying from secondary shock. We know of no agent to arrest it.

(10.) *Intoxication and delirium* on coming out of ether are especially injurious after a simple, or worse still, a compound fracture, has been set. Except in a child, or to settle a diagnosis, the setting of broken bones is better done without ether. In nervous women the delirium assumes the form called hysterical. I have seen it last for twenty-four hours.

The following operations are better done without anæsthesia: —

Extraction of cataract, already spoken of.

Tracheotomy for disease.

Paracentesis thoracis.

In tracheotomy for croup and diphtheria the little sufferer is already partially narcotized with carbonic acid. The cut frightens him no more than the ether would. The incisions through the skin comprise most of the pain. On the other hand, when etherized he often stops breathing, and the operation has to be done precipitately and not so well. It is absolutely essential, if you open the trachea in a child without anæsthetics, that you have abundant, cool, and competent assistants.

Tapping the chest and pumping off the pleural effusion has frequently been perilous, and sometimes fatal, with an anæsthetic. It is a safe operation without it.

There is no reasonable doubt that complete anæsthesia during parturition leads to tardy contraction of the uterus after labor, and hence increases the risk of flooding.

Deaths from inhaling sulphuric ether are rare. It is a noteworthy fact that most of them occur during operations on the rectum, perinæum, or in the vagina. The reason is not far to seek. The surgeon is too far removed from the anæsthetic to notice the mouth, the tongue, the respiration, the chest, the diaphragm. An incompetent assistant or a nurse holds the ether sponge, and the patient may die before her peril is discovered. The operator should watch the levator ani muscle, which moves with the diaphragm. This may be called perineal or pelvic respiration.

What are the essentials for giving ether safely?

An empty stomach.
A loose neck.
A free abdomen; no corsets or skirt bands.
Removal of artificial teeth.
An easy, semi-recumbent position.
A sponge wrapped in towels for the ether.
A gag, and forceps for the tongue.

When stertor occurs the patient should be tipped forward, the cheek opened with two fingers, the tongue drawn out, the fauces swabbed. To *insure* safety the surgeon should hear every respiration of the patient.

Anæsthesia from sulphuric ether is of two forms:—

(1.) Primary anæsthesia, which is a moment of confusion coming on after a very few inspirations. At this moment a felon can be opened without pain, and the patient wake at once.

(2.) Comatose anæsthesia, for prolonged operations. Ether *may* be given almost indefinitely. To relieve the hopeless agony of tetanus I have had it administered for twenty-four hours.

If you would avoid asphyxia, nausea, and headache, and be *safe*, use only the best and the purest anhydrous sulphuric ether.

Reports of Societies.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

SIXTH ANNUAL CONGRESS, HELD IN THE CITY OF NEW YORK MAY 12, 13, AND 14, 1884.

SECOND DAY. MORNING SESSION.

DR. F. H. HOOPER read a paper entitled

A RARE FORM OF TUMOR (CAVERNOUS PAPILLOMA) OF THE VOCAL BAND.

On account of the ease with which the growth described was removed, as well as its rarity and pathological interest, the case, he thought, was deserving of the attention of the Association. The patient, who was a clergyman thirty-two years age, was first seen by Dr. F. I. Knight, November 22, 1882. At that time he refused any operative interference. In 1883 he was referred to Dr. Hooper. He said he had always been healthy, and that in September, 1882, he suffered from a cold, with hoarseness. At the end of three weeks the cold left him, but the hoarseness had remained ever since, and had been so troublesome that he feared he would be obliged to give up preaching. Apart from the hoarseness and a tendency to "scrape" the throat there was no symptom referable to the larynx. A laryngoscopic examination showed the presence of a small, nodular, sessile growth on the anterior part of the left vocal band, of about the size of a number seven shot. It was thought to have some of the characteristics of a cystic tumor, but the diagnosis was very doubtful. On the occasion of the patient's second visit, with a view rather of testing the tolerance of the larynx than the idea of actually removing the growth, Dr. Hooper introduced a Fauvel forceps, but on withdrawing the instrument and placing it in a glass of water it was seen to have been detached, and adhered to one of the blades. The hæmorrhage was insignificant, and a subsequent examination with the laryngoscope showed that the entire mass had come away. The tumor was submitted to Dr. W. W. Gannett, who pronounced it cavernous papilloma. Its cavity was filled with red blood corpuscles, and he expressed the opinion that the growth had consisted of cavernous tissue from the start. The voice of the patient was at once restored to its natural tone, and there had been no return whatever of the trouble since. He had recently held special services daily for six weeks, and notwithstanding this unusual strain upon his voice had remained in good condition all the time. The only case resembling this which had thus far been reported, so far as Dr. Hooper knew, was one published by Fauvel. Drawings representing sections of the growth were presented for inspection.

[1] Continued from page 495.

DR. CARL SEILER said that he had met with a case very similar, with the exception that the epithelial structure was not as far developed as in Dr. Hooper's case, the growth being more of an angioma. The patient was a student of elocution, and all that he complained of was hoarseness.

DR. MORRIS J. ASCH, of New York, read a paper entitled

A CASE OF ECCHONDROSIS OF THE LARYNX.

Having mentioned that cartilaginous tumors of the larynx were rare, and referred to the literature of the subject, he said that there were only two cases on record in which the true character of the growth had been recognized during life. The patient in whom this occurred was forty-two years of age and an amateur vocalist of some ability. He complained of constant irritation of the throat, and also of continued hoarseness. Before operating Dr. Asch made a correct diagnosis of the character of the tumor, which sprang from the inner surface of the thyroid cartilage, on account of its hardness. He removed it with a modification of Stoerk's guillotine, the ring being made of well-tempered steel, with a cutting edge on its upper border. The growth was pronounced by Dr. George L. Peabody, pathologist to the New York Hospital, to be a cartilaginous tumor undergoing calcareous degeneration. There had been no return of the trouble, and since the operation the patient had gained two notes in his vocal register. The case was of interest as showing, *first*, that tumors of this character came under the care of the laryngologist not only for diagnosis but for cure, and, *second*, that they could be cured by endo-laryngological methods.

The paper was discussed by Drs. Cohen, Seiler, and Langmaid. The latter expressed the opinion that the increase in the vocal register after the operation was due, *first*, to the removal of the irritation, and, *secondly*, to the moral effect on the patient by the relief thus afforded him, and in this Dr. Asch concurred.

DR. W. C. JARVIS, of New York, read a paper on

A NEW METHOD FOR THE REMOVAL OF LARYNGEAL GROWTHS.

The agent which he employed for this purpose was chromic acid, and the form of growth for the destruction of which it was specially adapted was papilloma. As, according to Mackenzie, sixty-seven out of one hundred tumors of the larynx were papillomata, and Cohen had found forty-eight out of sixty-six tumors of this character, it would be seen, he said, that its field was quite an extensive one. He was aware that there was a deep prejudice in the minds of laryngologists against

this agent; but he felt convinced that it was not deserved, since it had arisen from its abuse and not its proper use. He did not wish, however, to exclude the forceps and the snare. The case in which he had first employed it was a very bad one, a large papilloma filling up almost the entire larynx, reducing the voice to a discordant whisper, and causing dangerous spasm and dyspnœa. In nine days, on five of which no applications were made, the voice was restored to its natural tone, and in nineteen days the patient was pronounced cured, and the treatment discontinued. Having explained the action of the remedy and the method of application, Dr. Jarvis summed up his views as follows: —

(1.) Trioxide of chromium, or chromic acid, locally applied, has a self-limited action.

(2.) It is a safe and reliable means for the removal of large and small soft laryngeal tumors.

(3.) It also has the effect of preventing their return.

(4.) It is best employed fused on the point of a probe.

(5.) An instrument to act as a protector and guide may be used with it. (This was exhibited by Dr. Jarvis, and consisted of a tube provided with a trigger and a spring, the force of which could be accurately regulated. Its objects were, *first*, to prevent the acid from coming in contact with the tissues before reaching the growth to be removed, and, *secondly*, to surprise the larynx.)

(6.) Its use is not necessarily attended with pain or spasm.

(7.) It offers a substitute for tracheotomy and thyrotomy in certain cases where these measures are ordinarily judged necessary.

The paper was discussed by Drs. Cohen, Roe, Seiler, Ingals, and Major, and the discussion brought to a close by Dr. Jarvis, after which a number of

NEW INSTRUMENTS

were presented. Among these were a nasal speculum devised by Dr. J. N. Mackenzie, a tonsillotome with three blades, and a uvulatome by Dr. C. E. Sajons, and an apparatus for artificial feeding by Dr. D. B. Delavan.

SECOND DAY. AFTERNOON SESSION.

DR. D. BRYSON DELAVAN, of New York, read a paper entitled

PERMANENT UNILATERAL PARALYSIS OF LARYNGEAL ABDUCTORS, FOLLOWING CEREBRAL HÆMORRHAGE. UNIQUE CASE.

He had been able to find no recorded case of this character, and the only reference to the condition met with which he had seen in medical literature was in Nothnagel's article on cerebral hæmorrhage in Ziemssen's Cyclopædia, where he simply remarked that unilateral paralyses of the vocal cords (as a result of such hæmorrhage) were exceedingly rare.[1] The paralysis had occurred in connection with paraplegia, the result of cerebral hæmorrhage in a patient sixty-nine years old, and had now lasted since 1877; though all the other paralytic trouble had long since disappeared. Dr. Delavan said he had no theory to advance in connection with its ætiology.

DR. F. I. KNIGHT reported a case, which he said was very pertinent to Dr. Delavan's, where a patient, as the only injury from falling down stairs and striking his head, suffered from unilateral paralysis of the abductors. There was probably some lesion either of the nerve or at the nerve-centre.

DR. R. P. LINCOLN, of New York, read a paper describing a case of

STRICTURE OF THE ŒSOPHAGUS.

The stricture was due to medullary cancer, which involved the larynx, trachea, œsophagus, and cervical glands, and death was due to implication of the cardiac branches of the vagi nerves. No sounds or bougies could be used without exciting inflammation; and on only one occasion was a bulb-pointed catheter passed without producing this result. This was but a very short time before the patient's death.

In the discussion, which was participated in by Drs. Roe, Knight, Donaldson, Daly, and Ingals, Dr. Roe suggested that Krishaber's method of leaving an œsophageal tube *in situ* might perhaps have been tried, and Dr. Daly said he thought that there might perhaps have been a chance for gastrotomy.

DR. LINCOLN closed the discussion. In reply to Dr. Roe's criticism he said that it was to be borne in mind that any attempt at interference with the œsophagus, at least any sufficient to pass a sound, was always followed by great inflammatory reaction. Moreover, there was a prompt improvement that attended the soothing treatment at first instituted which seemed to justify its continuance. In regard to Dr. Daly's suggestion he wished to say, that while the statistics of operations so far reported gave but little encouragement for adopting the method, in any case, certainly the sequel in this case showed that it would have been useless; the cause of death having been pointed out to have been due to implication by the disease of the cardiac branches of the vagi nerves.

DR. E. FLETCHER INGALS, of Chicago, read a paper on

TRACHEAL STENOSIS,

in which he related the histories of three cases which had come under his observation during the past year, all of which were of syphilitic origin. In one tracheotomy was performed. He advocated large doses of iodide of potassium as of special value in this affection.

The paper was discussed by Drs. DeBlois, Shurley, Langmaid, and Delavan, most of whom mentioned cases that they had seen. The President remarked that the opinion generally expressed by the Fellows seemed to be in favor of the iodide. For himself he preferred mercurial inunctions, as he believed the iodide a dangerous remedy in this affection, on account of its tendency to produce œdema. In the treatment of syphilis in general, even in the later stages, he had gradually come to use the iodide less and less, and to rely more and more fully upon mercury.

DR. INGALS replied that he believed it to be a fact that the iodide was not nearly as likely to produce coryza, œdema, etc., in large doses as in small ones. Thus, he knew of a physician who suffered from iodic coryza if he took five grains of it, but not if he took ten grains or more.

THIRD DAY. MORNING SESSION.

DR. T. A. DEBLOIS, of Boston, read a paper, in which he gave the histories of two

[1] American edition, vol. xii., p. 116.

CASES OF BUCCAL TUBERCULOSIS,

both of which speedily proved fatal. He thought the affection sufficiently rare to deserve mention whenever it was met with, either where the tubercular deposit first showed itself in the mouth, or where, after manifesting its presence in other parts of the body, it finally extended itself into that region. He did not believe there was any good reason to doubt that tubercles always existed in the lungs before they appeared either in the pharynx or the larynx, and he was fully prepared to admit the same in regard to buccal tuberculosis.

The paper was discussed by Drs. Langmaid and Bosworth.

DR. C. E. SAJOUS, of Philadelphia, read a paper on

HAY FEVER AND ITS SUCCESSFUL TREATMENT,

in which he set forth the following propositions: —

(1.) That there was an idiosyncrasy existing in certain individuals to become influenced by certain emanations or irritating substances.

(2.) That the idiosyncrasy was accompanied by a chronic hyperæsthesia of that part of the nasal mucous membrane covering the anterior and middle turbinated bones, the middle meatus, the floor of the nose, and that part of the septum between the limits of the olfactory membrane.

(3.) That organic alteration of these parts annulled that hyperæsthesia, preventing, at the same time, what symptoms the patient might be liable to in case of an access.

(4.) That any destructive agent would induce that organic alteration, but the galvano-cautery was by far the best, being painless, effective, and devoid of all danger when used in practiced hands.

He said that until after he had finished the paper he had not been aware of Dr. Roe's articles on the ætiology and treatment of hay fever.

A long discussion followed, in which Drs. Shurley, Roe, Mackenzie, Robinson, and S. Johnston took part. The President then expressed the opinion that in every case of hay fever there were three essential elements: a neurosis, a structural change in the nasal cavities, and a special sensitiveness to dust, pollen, or other source of irritation. If any one of these factors were removed the case would undoubtedly be cured, and it did not make the slightest difference which one of the elements was done away with, the result would be the same. The discussion was brought to a close by Dr. Sajous.

DR. E. L. SHURLEY, of Detroit, read a paper on

THE COMPARATIVE VALUE OF THE GALVANO-CAUTERY IN DISEASES OF THE NASAL AND PHARYNGEAL CAVITIES,

in which he gave his preference to this method of destroying tissue, as a rule, over mechanical instruments and chemical agents. The tendency of the present day, he thought, was to destroy too much tissue, and he therefore advised that as little as possible should be injured or destroyed, and that as narrow a tract as would suffice should be cut through the neoplasm to be removed. The paper was discussed by Drs. Jarvis, Sajous, Roe, Mackenzie, and Bosworth, the President remarking that there could be no doubt that American laryngologists were now beginning to do much better work than their brethren in Europe. Dr. Shurley closed the discussion.

DR. BEVERLEY ROBINSON, of New York, read a paper entitled

A CONTRIBUTION TO THE STUDY OF ADENOID VEGETATIONS AT THE VAULT OF THE PHARYNX,

which was mainly derived from his own experience. In it he stated that he had found this to be a much more rare affection than was commonly supposed, and that it was not nearly so frequently associated with aural disease as many authorities stated. He had never yet met with a single instance in which pressure of the growth over the Eustachian tubes gave rise to deafness. He also took exception to follicular pharyngitis being considered of an adenoid character, although he acknowledged that the two affections were not infrequently associated. In the treatment he had employed the method of Meyer, of Copenhagen, to some extent. Also the Thomas uterine curette, followed by applications of nitrate of silver or the galvano-cautery, and, in the case of pedunculated growths, the snare.

In the discussion which followed, which was participated in by Drs. Langmaid, Mackenzie, Major, Roe, Asch, and Jarvis, it seemed to be the prevalent opinion that disease of the ear was perhaps more frequently associated with adenoid vegetations than Dr. Robinson believed. In closing the discussion the latter remarked that the most important point which he wished to bring out in his paper was that the galvano-cautery, the snare, and other violent measures were really of no use in one half of the cases of nose and throat disease in which they were employed, and that not infrequently they did harm.

The last paper of the session was read by DR. LOUIS ELSBERG, of New York, on

SPASM OF THE GLOTTIS.

This he defined to be the spasmodic contraction of one or all of the laryngeal muscles. The spasm might be simple or complicated (with similar contraction of other muscles), unilateral or bilateral (the latter being almost universally met with), and might occur in the domain of either the superior or inferior laryngeal nerves. Again, the spasm might be expiratory (including the phonatory), inspiratory, or deglutitory.

In considering the ætiology, he said that the most important predisposing cause was morbidly increased irritability of the nervous system. Age was also a very important factor, the affection occurring most frequently between the ages of four months and two years. It was a mistake, however, to regard it as exclusively a disease of childhood. Male children were more subject to it than females, but in adult life it was more frequently met with in females than males. Heredity, as well as the general condition, had considerable bearing in the causation. Children badly nourished, and living in unhealthy and badly-ventilated apartments, were especially liable to it, and rachitical and hydrocephalic children were frequently attacked with it. It often came on at the time of weaning, and, as a rule, it was more common in hand-fed than in nursing infants. Enlargement of the thyroid had formerly been supposed to be the only cause of it, but in reality this was not a cause at all, though it was frequently present in cases in which it occurred. Among the other causes he mentioned were hysteria, injuries from food getting into the larynx, catarrhal inflammation of the

respiratory mucous membrane, gastric disturbances, enlargement of the tonsils, and emotions like anger and fright.

The symptoms varied according to the set of muscles affected. In abductor spasm there was insufficient closing of the rima glottidis. There were several forms of adductor spasm: —

(1.) Deglutitory. The attacks were usually short, with complete immunity from dysphagia in the interval, but in one case which he had seen there was complete spasm of all the adductors for a week, so that the patient was actually threatened with starvation.

(2.) Inspiratory. This was characterized by closure of the rima glottidis, and might be mistaken for paralysis, though this might coexist.

(3.) Simple phonatory. In this there were no symptoms until the patient attempted to use the voice, which would be choked in sound. If phonatory efforts were persisted in, however, dyspnœa was liable to result.

(4.) Simple expiratory. Here the attack came on if the patient attempted to whisper as well as to speak or sing. It had been known to come on in the acts of blowing out a candle, of coughing, and of laughing.

(5.) Complicated expiratory. This was the form sometimes called "curious cough." In regard to its mode it might be paroxysmal or continued. In the continued the hacks were not as severe as the cough, and they observed a certain rhythm. Chorea was sometimes noticed in connection with it, and this was the kind of spasm that had given rise to the name of "laryngeal chorea." Such terms as "laryngeal chorea" and "laryngeal epilepsy," however, he said, ought never to have been employed, and he trusted that they would soon be dropped forever from medical literature. The acoustic characteristics of this variety were very peculiar, and the sound might resemble barking, quacking, lowing, or crowing, while it was often very loud.

(6.) Complicated inspiratory. This was the most common and dangerous, and was the form ordinarily known as laryngismus stridulus. The graphic description of it by Morell Mackenzie, in his work, gave a true and striking picture of its characteristics. In speaking of the prognosis Dr. Elsberg quoted from Mackenzie the statement that the longer the interval was between the attacks the greater was the chance of recovery.

The treatment, he said, often required great promptitude, sometimes operative skill, and always good judgment. The ordinary means for relaxing spasm, he thought, would occur to all, and for lack of time he would not dwell upon them. It was often necessary to thrust the finger into the throat to see if the epiglottis was impacted, and catheterization of the trachea was sometimes required. This he preferred to tracheotomy.

After the paper had been briefly discussed by Drs. Ingals, Jarvis, and Roe, and Dr. Elsberg had replied, the officers for the ensuing year were elected as follows: President, Dr. E. L. Shurley, of Detroit; first Vice-President, Dr. S. Hartman, of Baltimore; second Vice-President, Dr. William H. Daly, of Pittsburg; Secretary and Treasurer, Dr. D. B. Delavan, of New York; Librarian, Dr. T. R. French, of Brooklyn; and Members of the Council, Drs. F. H. Bosworth, of New York, and F. Donaldson, of Baltimore.

The time and place of the next meeting were left to the decision of the Council.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.[1]

ALBERT N. BLODGETT, M. D., SECRETARY.

DR. T. A. DEBLOIS read a paper upon

TONSILLITIS.

DR. J. W. FARLOW opened the discussion upon this subject as follows: I agree with Dr. DeBlois in thinking that it is not possible to draw so sharp a line as is generally done between follicular, parenchymatous, and phlegmonous tonsillitis. When the parenchyma is affected the follicles are also liable to be, giving rise to the secretion, more or less of which we find in most cases. Of two cases which begin and continue alike for several days, one may remain an ordinary case of tonsillitis while the other goes on to the formation of an abscess.

The difficulty of knowing whether diphtheria or some other disease is to follow what looks at first like simple tonsillitis has been well described by the reader, as also the need of "hedging" in communicating the diagnosis to the friends of the patient.

In cases seen early where there is much fever I am in the habit of ordering a Dover's powder or aconite, to be followed by a saline in the morning. I have never satisfied myself that I had benefited a case by the use of guaiac or chlorate of potash.

I have never found astringent gargles of more use than very hot water. I direct the patient to fill his mouth at frequent intervals with hot alkalized water and hold it for several minutes. He is then to let the water run out by holding his head over a basin. This serves to remove the thick, tenacious secretion of which patients always complain, and which they find great difficulty in expectorating. Gargling is always a painful process in such cases.

I find relief from scarification, especially when the uvula is œdematous. When the presence of pus is probable, a deep incision, whether pus is found or not, makes the patient much more comfortable.

DR. PRINCE thought it was a very interesting paper, and agreed with the reader in what he had said regarding the efficacy of the different varieties of treatment that were in use. For himself, he took a different view of the pathology of the affection from the reader, and believed in the *constitutional nature of the disease.* This was a point of considerable importance from the stand-point of treatment. He did not mean to say that every case of follicular tonsillitis was the expression of a constitutional fever. On the contrary, as in inflammations in other parts of the body, there was a local as well as a constitutional form.

Specialists who principally have to do with cases in dispensary and office practice meet with the former variety, while general practitioners see the constitutional form. The latter class of patients are usually too ill to leave their beds, much less the house, and are not found in out-patient departments of hospitals, or at least not till the disease has run its course. In this way the difference of opinion regarding the pathology of the affection can be explained. He thought that specialists were more inclined to see in follicular tonsillitis only a local affection, while general practitioners more commonly thought it of constitutional origin.

[1] Concluded from page 472.

His own views of the constitutional nature of the affection are based upon various facts; among others, the severity of the constitutional symptoms observed. Even when associated with insignificant local inflammation, it is not uncommon to see high fever, great prostration, severe backache, sweating, headache, anorexia, and stupor, followed by protracted convalescence, though the local trouble was so slight as hardly to induce the patient to use the gargles, etc., prescribed.

As a result of his studies he has found: —

(1.) With slight local inflammation high fever and severe constitutional disturbance, and *vice versa*.

(2.) Slight local inflammation and slight increase of temperature combined with severe constitutional symptoms, showing that the latter were not dependent upon the fever.

As "hospital sore throat" the disease was very common amongst internes and nurses in hospitals. He had found as a result of his inquiries that sixty-three per cent. of the internes in the Boston City Hospital had the disease, and that fifty-nine per cent. of the nurses in the hospital at the time the inquiry was made had already had it. Many more would probably have it before their term of service was finished. Under these conditions the disease was usually very severe, more so than could be accounted for on the theory of a simple local inflammation.

The disease also occurred in epidemics, of which several had been reported. He had recorded two in a paper on this subject read before the Society about two years ago. In the epidemic form it was certainly constitutional.

The reader had said that he himself was liable to the disease and was frequently affected, but Dr. Prince believed that while this might be true of simple catarrhal sore throat, such as is met with in dispensary practice, the form to which he referred he believed usually occurred but once in the same individual.

In regard to treatment of this form, he had found the best to be painting the throat frequently, every hour or two, with co. tinct. benzoin. The tonsils must be thoroughly covered each time so as to leave a deposit of the yellow gum upon the surface. This always relieved the pain, and enabled the patient to swallow with comparative comfort. He had not yet met with a case which was not benefited by this, though of course it could not be inferred that the remedy would never fail. An ice bag around the neck gave great relief to the head symptoms, while sponging the body with alcohol and water did the same for the backache. He also gave Dover's powders at night and sometimes during the day. The constitutional symptoms in his experience called for more active treatment than the local manifestations.

Dr. Cobb mentioned a case of tonsillitis occurring in a Swedish girl, accompanied with the appearances of abscess. On puncture, a small amount of pus was liberated, but the entire quantity was not evacuated. Within a week the girl was admitted to the City Hospital with scarlet fever. The question was asked if such cases were frequent.

Dr. DeBlois stated that one such case had recently come to his notice. The case was one of follicular tonsillitis with much depression and exhaustion of strength. The prognosis was of a grave character from the threatening nature of the symptoms, which led to the apprehension of some other more serious disease, and a few days later the patient suddenly expired while being brought down stairs to be taken to the City Hospital.

The following particulars in this interesting case were communicated by Dr. George G. Hayward, the physician attached to the Dispensary District in which the patient lived.

DIPHTHERIA WITH COMPLICATIONS.

Patient, male, nineteen years of age, laborer, single, born in Ireland, had only been in this country a few months, was a strongly built man, of temperate habits. He first came under my charge December 12, 1883, and was treated at that time for dyspepsia and a heavy cold, from which he soon recovered, and after a few days went about his work again. I next saw him February 2, 1884, and learned that the day previous he had been to the Boston Dispensary Throat Department, where he had been treated, and that diphtheria had been suspected. At this time there was high fever. Temperature 105° F., rapid pulse, tongue heavily coated, and all the soft parts covered with a distinct membrane, some of which was with difficulty removed. On further examination the body was found covered more or less thickly with a fine rose-colored eruption, more especially marked upon the lower part of the abdomen and thighs (where he was actually the color of a boiled lobster).

Diagnosis, was made of diphtheria with scarlatina. I afterwards learned that there had been scarlet fever in the house a few weeks previous.

Treatment, was Dover's powder at night, hot gargles, or rather douches, steamed flannels externally, changed often, and replaced by dry ones, steam inhalations, and as much steam as possible kept in the room, carbolic sprinkled about the floor. The mouth was swabbed out three times daily with hot water applications.

Diet. Milk, beef tea, ice. Stimulants in milk occasionally. Nourishment was taken fairly well until the last day, so much so that it was only given by the mouth.

February 3d. Temperature 104° F. About the same condition, breathing well, however; treatment continued.

February 4th. Temperature 103.5° F. Seemed somewhat improved and brighter; more membrane removed, and it was stated that some more had been coughed up during the night.

February 5th. Was called early on account of alarming symptoms. Temperature 104° F. Face flushed; skin dull color; pulse slow and feeble, but breathing was good; voice very feeble. There was no indication for tracheotomy, which I had supposed might be required from what was told me of the symptoms.

The trouble seemed to be rather failure of the heart's action than anything else.

Dr. Kingman saw the case with me in consultation, agreeing with me as to diagnosis, and we decided it was best to send the patient *at once* to the hospital.

The heart was examined at this time as it had been several times previously, and no organic trouble could be detected.

Digitalis was at this time given, followed later by carbonate of ammonia, and the patient was ordered to the hospital. On leaving him he seemed considerably improved, and roused himself enough to shake hands and ask me to come and see him.

Brandy in milk was ordered before starting.

Instead of taking him at once he was left three

hours, and while being carried down stairs, having just reached the lower landing, he fell and died soon after. This would seem to indicate failure of the heart, and had it not often been previously examined, I should have been inclined to suspect organic disease.

The case seems to me doubly interesting, —

(1.) As a rare combination of disease.

(2.) As to the cause of death.

DR. FARLOW asked if any member had been able to observe any beneficial result from the employment of chlorate of potassium in tonsillitis.

In answer to Dr. Farlow's question as to the curative effect of chlorate of potassium in tonsillitis, DR. V. Y. BOWDITCH said that he had no faith in its curative effect, but believed that hot gargles containing it often gave great relief both from the grateful sense of warmth and from the fact that it seems to cleanse the mouth from the thick secretions and disagreeable taste which are present. He also testified to the efficiency of the guaiac lozenges in relieving soreness of the throat, and recommended those of the London Hospital Pharmacopœia as being pleasant to the taste.

DR. DISBROW asked Dr. DeBlois if there was any means of aborting the disease in its early stage. Speaking from his own experience, having suffered for many years with attacks of tonsillitis, he found by painting the tonsils with tinct. iodine comp. two or three times a day in its early stage, he prevented the formation of pus and cut short the disease. He had also found a strong solution of nitrate of silver useful, and he had used the comp. tinct. guaiacum, but had not found any benefit from it. He had used, to hasten the formation of pus, an old domestic gargle composed of vinegar, water, sugar, and capsicum, in conjunction with hot poultices externally. In follicular tonsillitis he had found painting with tinct. iron very useful. In regard to the guaiacum troches, they have been very useful in a case of irritative cough after other means had failed.

DR. DEBLOIS thought that patients often swallow with less difficulty after the use of chlorate of potash, and this is certainly of benefit as far as it goes. If we can remove the pain and discomfort the inflammation will in many cases take care of itself. Scarification is often of service in the same way. Troches containing guaiacum are also often of service in tonsillitis.

DR. HARLOW stated that in the opinion of an eminent Boston physician, now dead, guaiacum never did anybody any good except the apothecary.

Adjourned at 10.05 o'clock.

PHILADELPHIA CLINICAL SOCIETY.

G. BELTON MASSEY, M. D., REPORTING SECRETARY.

STATED meeting, April 25, 1884. The President, DR. HENRY BEATES, JR., in the chair.

DR. HANNAH T. CROASDALE reported a case of

VESICO-VAGINAL FISTULA WITH INVERTED BLADDER.

The record which is brought to your notice this evening is that of a case which perhaps is possessed of more than ordinary interest from two circumstances: first, from the enormous size of the opening in the septum, and secondly, from the fact that from the orifice a bright round body protruded, which was discovered to be the bladder inverted. The patient, M. F., aged forty-seven, was admitted to the Woman's Hospital October 11, 1881. She was married at the age of twenty-five and had one child stillborn. The labor was instrumental, and incontinence of urine occurred soon after it, thirty years ago.

For this trouble and great discomfort the woman never sought relief, and speaks only of her present suffering having begun one year before admission. This suffering had been so intense that she had been obliged to keep her bed for that length of time. The journey from her home had been made on a bed. Her appearance was deplorable. She had constant pain in the lower part of the abdomen; bowels were constipated, appetite poor, face anxious, and she was constantly distressed lest the bed or her clothing be moved and thereby her sufferings be increased. It seemed almost hopeless to expect to do anything for the poor woman's relief, so disturbed was her health from her desperate condition.

Nausea and vomiting were almost constantly present. Her pulse on the day following that of her admission was 65; temperature 99° F.; and respiration 26. The quantity of urine in twenty-four hours could not be ascertained. The color was pale yellow; specific gravity 1000; reaction alkaline, and there was a trace of albumen. After ineffectual attempts she was finally etherized and thoroughly examined October 29th.

The tumor which was so exquisitely sensitive was the inverted bladder, and the exposed mucous membrane was greatly inflamed and bled readily on being touched. The openings into both ureters could be distinctly seen. The mass was grasped and by gentle taxis was reduced and retained by the slight support afforded by one of Skene's glass stylets made to pass through the urethra with the distal extremity resting upon the upper edge of the fistulous opening. A vaginal glass plug was introduced into the vagina to aid in supporting the bladder. The inflamed condition of the parts forbade any further procedure at this time.

On the 30th of November she was again etherized and placed in the lithotomy position, and the edge of the fistula, which was about five centimetres in diameter, was carefully pared, beveled from the vesical margin giving a broad surface on the vaginal septum, and twelve sutures of silver were introduced. It was necessary, before closing the fistula, to liberate adhesive bands at either angle, and then the margins of the opening were closed by the sutures and secured by perforated shot. A self-retaining catheter was introduced, to which was attached a piece of rubber tubing for conveying the urine to the urinal. The patient was then placed in bed and one sixth grain morph. sulph. given hypodermatically; she was ordered lime water and milk every two hours.

The following day, December 2d, there was much vesical tenesmus, which gradually subsided, and nothing especially worthy of note occurred until December 7th, when the sutures were removed. Union was not perfect at either angle, and in the centre there was a small orifice which admitted the passage of urine.

January 6th the patient was again etherized, the edges of the three minute openings freshened, and fine silver wire suture introduced. The central and right openings promptly closed after this second operation, but the left, just at the site of the ureter, admitted the passage of a Snelling's probe.

Then January 20th, February 3d, and March 28th I operated, hoping to close this minute orifice which

still remained, and which still allowed of the passage of urine when the bladder was filled. Not one of these efforts was followed by any better success. These attempts were always made with a probe carried through the urethra into the opening in the ureter in order to prevent wounding or closing the latter.

It was now thought best to send the patient home and encourage her coming again in the autumn, as her stay had already been much prolonged beyond the usual time for keeping patients in the hospital, and she was discharged May 8, 1882, quite content on her part with the result of the many operations — six in all. After several months, however, the urine ceased to pass through this opening, probably from the contraction of cicatricial tissue.

I find many contributions to the surgical literature for the relief of vesico-vaginal fistula, but nowhere have I found any record of a case of an inverted bladder through the fistulous orifice.

THIRTY-FIFTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

Friday, May 9th. Fourth Day.

The meeting being called to order by the President, Dr. J. C. Dalton, chairman of

the committee on experimental medicine,

offered resolutions supplementary of those previously reported to the following effect: That the Association desires to express its earnest conviction that experimentation on animals is most useful for the promotion of medical science, and should be intrusted only to members of the medical profession. That the committee be continued and empowered to fill vacancies. Adopted.

resolution concerning nominations of journal trustees.

Dr. Grissom, of North Carolina, then offered a motion, which was carried, that in future nominations to vacancies on the Boards of Trustees of the Association's *Journal* be made by the Committee on Nominations.

reports of committees.

The Committee on the President's Address reported through its chairman, Dr. N. S. Davis, that several members had left the city; that no declarations or explanations concerning the Code should be made without careful consideration; that the committee be continued with instructions to report at the next meeting. This was adopted, and the President was added to the committee.

The Committee on Nominations then reported the names of W. W. Allport, of Illinois, as chairman, and Edward C. Briggs, of Massachusetts, as secretary of the Section on Oral and Dental Surgery.

international medical congress.

A permanent committee on the invitation to the International Medical Congress was appointed with the following members: Drs. H. F. Campbell, President-elect, Hays, Sayre, Christopher Johnson, Engelmann, J. M. Browne, Billings.

medical education.

Dr. Von Klein, of Ohio, gave notice of a proposed amendment to the By-laws, as stated in two resolutions: —

Resolved, That no person who shall hereafter graduate from a college where an educational test is not a prerequisite to admission shall be a delegate to the Association.

Resolved, That all delegates shall present as a part of their credentials a certificate, from the county or State society they represent, showing from what college and when they graduated, excepting delegates from the army and navy.

resolutions and amendments.

Dr. Pratt, of Michigan, proposed an amendment that each Section nominate its own chairman and secretary. He also made a motion, which was carried, that a pamphlet containing the minutes of the Association, with its Constitution and By-laws, be prepared by the publishers of the *Journal* for distribution among members at the next meeting.

A resolution was adopted urging upon Congress the importance of providing for a Museum of Hygiene.

Resolutions by Dr. Pratt requesting Congress to legislate for the prevention of the immigration of the insane and pauper classes to this country, which had been ruled out of order earlier in the day, were brought up again and voted.

Dr. Seiler, of Philadelphia, offered an amendment to the Constitution dividing the Section of which he was secretary into (1) Ophthalmology, (2) Laryngology and Rhinology, Otology.

The Treasurer's annual report showed a balance on hand of $2212, and it was voted to continue the annual dues at $5.

Resolutions were offered and adopted urging Congress to provide for the publication of a new edition at cost of all the volumes of the Medical and Surgical History of the War of the Rebellion, and others urging more stringent laws against pleuro-pneumonia.

A resolution, offered by Dr. Von Klein, of Ohio, to abolish the opening of sessions with prayer, was rejected.

A resolution protesting against the indorsement by members over their signatures of mineral waters and pharmaceutical preparations was carried.

Resolutions from the West Philadelphia Medical Society in earnest support of the Code of Ethics, and resolutions from the St. Louis Medical Society condemning professional advertisement through medical colleges, were all referred to the Judicial Council.

Dr. A. L. Gihon, of the United States Army, brought forward a motion, which was carried, that a committee be appointed to further the erection in that city of a monument to Dr. Benjamin Rush.

A large number of delegates were appointed to the International Medical Congress; and, after the passage of votes of thanks to all individuals, institutions, and corporations which had extended hospitalities and courtesies to the Association, and of a vote of thanks to the presiding officer, the thirty-fifth annual meeting of the Association was adjourned.

— *The Archives of Pediatrics*, a medical monthly devoted to the diseases of infants and children, will henceforth be issued from the New York office of John E. Potter & Co., publishers.

Recent Literature.

History of the Discovery of the Circulation of the Blood. By HENRY C. CHAPMAN, M. D. Philadelphia: P. Blakiston, Son & Co. 1884. 8vo. 56 pages.

In these days of restless research and experiment, when a new and specific bacterium may be had almost for the asking, and the highest culture is brought, as it were, to the very doors of the bacillus, it is a pleasure to record evidence of an interest in the history of any portion of medical knowledge. Such is to be found in this lecture by Professor Chapman, which relates the gradual development of our acquaintance with one branch of physiology.

The tercentenary of Harvey's birth (April 1, 1578) naturally called attention to his relations to this discovery. Not only in England was a fresh interest in this subject awakened; the Italians were astir to advocate the claims of their countrymen to a share of the merit. This national rivalry has provoked not a little acrimonious discussion, but the field has been freed of much prejudicial rubbish, and the true relations of Harvey to this question are becoming clearer.

Until very recently it was a tremendous heresy to doubt his claims to the completest originality as a discoverer and his superiority as a man. Now our estimate of him has been much modified and corrected, and although the idol have lost something of its glory, the honor due to others has been more wisely distributed. A portion of the literature of this dispute is in Italian, some, and not the least valuable, is in German, of which that contributed by Tollin is the most important; even the English portion is not too readily accessible to the American reader, and many will be grateful to Dr. Chapman that he has been led to put the tale into a handy form in English, and one convenient for the student. In this he has succeeded well, and the fair-minded reader, even though unfamiliar with the history of the discussion, will probably agree with him in his judgment that the discovery of the circulation of the blood belongs to no one man or age, but that many men have builded thereon, sometimes perhaps better than they knew, and that even in our times important additions are made.

Dr. Chapman fortifies his position with numerous references to the authorities, and considerable quotations from the works of those who have a claim upon the discovery. He has refrained from any too detailed account of Harvey, and the curious (and as some believe misguided) English enthusiasm for him. In this he has doubtless done wisely, but a fuller bibliography of this portion of the subject would have been very acceptable. The printer, however, has made a sad mess of many of the quotations, touching, apparently, no language to adorn it. Such as we have been able to verify present numerous and curious slips of the type-setter, which need not be noted here. It is, perhaps, well to remark that the reference to Haeser (p. 13) is to the first volume of the third edition, and that Berengar de Carpi is the more common form, not Berenger; Mundini (p. 13), Guntherus (p. 25), and Rumi (p. 38) are of course *lapsus oculi* for Mundinus, Guintherus, and Ruini. These are slight oversights, easily corrected in the work on Physiology which Professor Chapman is preparing, and of which this lecture will form a chapter. In the allusion to Erasistratus (p. 11) the hope is incidentally awakened that other subjects as well will receive historical treatment in the larger work. Should this prove to be the case we shall have a book of unusual interest and value.

Handbook of Vertebrate Dissection. By H. NEWELL MARTIN, D. Sc., etc., and W. A. MOALE, M. D. Part III. How to Dissect a Rodent. New York: Macmillan & Co. 1884.

This is the third part of the eminently practical work now appearing. It is not a text-book of comparative anatomy, nor precisely what we call a "dissector," though partaking of the character of one. In short, it teaches the student how to dissect a rat, which is chosen as a representative of the class of mammalia, and special attention is accordingly given to the characteristics of the class rather than to those of the genus or species, or to minute points of structure. This is the plan, and it only remains for us to say that the work strikes us as excellent.

A Course of Instruction in Zoötomy (Vertebrata). By T. JEFFERY PARKER, B. Sc. London, Professor of Biology in the University of Otago, New Zealand. With Seventy-four Illustrations. London: Macmillan & Co. 1884.

This book reaches us together with that just noticed, and is very similar to it in method, but is of a wider scope, giving directions for the study of the lamprey, the skate, the cod, the lizard, the pigeon, and the rabbit. The choice depends somewhat on the prevalence of these animals in New Zealand. The author has been demonstrator to Mr. Huxley, and acknowledges his assistance in looking over parts of the work written in England. We have nothing but praise for the execution of the work.

Legal Medicine. By CHARLES MEYMOTT TIDY, M. B. F. C. S., etc. Part II. Philadelphia: Henry C. Lea's Son & Co. 1884.

The promise and hope held forth in the first volume of this work, that the author would give to his readers, as the full result of his labors, a complete treatise on legal medicine, is not disappointed in this the second part of the series. The same care is manifested in the composition, the same remarkable industry in the critical review of the medico-legal literature of the world is illustrated. To many students of forensic medicine this second volume may, indeed, prove more attractive than its predecessor on account of the range and nature of the subjects discussed, and because those subjects are of more practical interest, as the following necessarily brief analysis will show.

In Chapter I., under the general head of Legitimacy and Paternity, are discussed the topics of impotence and sterility in the male and the female, hermaphrodism, the medico-legal relations of utero-gestation, and the signs of maturity in the newly-born child.

In the second chapter the medico-legal aspects of pregnancy are studied; the signs of pregnancy and of recent delivery, in the living and the dead, are given,

including a full discussion of the vexed questions relating to the value of the *corpus luteum* as evidence of conception.

The third chapter is devoted to abortion and fœticide, followed by a full and discriminating treatment of the subject of rape and its related topic, the signs of virginity.

The legal and physiological difficulties connected with "live birth," with a consideration of the evidence by which the medical jurist proves the child to have been dead at birth, are fully elaborated in the next chapter, and serve to introduce the reader to the study of infanticide.

The last five chapters are given to the discussion of asphyxia in its general relations, and to special examples of that process as they are illustrated in death by drowning, by hanging, by strangulation, and by suffocation.

This bare outline will serve simply to indicate the variety and scope of the medico-legal topics treated in this volume. It can furnish no hint of the attractiveness with which they are presented, or of the intelligence, good judgment, and erudition, which the author has displayed in this encyclopædic work. As in the first volume, so in this, the plan of attaching to each chapter a copious appendix of illustrative cases drawn from all sources, and referred to in the text by means of parenthetical numerals, is a source of great convenience; the cases thus cited are of the latest as well as of older date, and in themselves constitute one of the most valuable features of the treatise. Another useful innovation is the grouping, at the end of each section, of specific directions for the practical application of the rules and principles previously discussed.

Many quotations might be made to illustrate the conservative and judicial tone which pervades the author's writings. In his preface to the work he expresses a sentiment which every medical expert would do well to include among his golden texts: "For the medical jurist, whose object should be the interests of justice, to hesitate where science is positive is as unjustifiable as for him to speak without reserve on those details of our science where the limits of exact scientific knowledge are undefined. There is a scientific certainty which only the coward treats as uncertainty, and there is an uncertainty which only the boldness of ignorance ignores." Of this suggestive and thoughtful statement the author makes just application in his volumes, and his pages are therefore remarkably free from misleading dogmatism.

Medical Annals of Baltimore from 1608 to 1880, including Events, Men, and Literature. By John R. Quinan, M. D. Baltimore. 1884.

The Medical Annals of Baltimore contain an interesting record of medical sayings and doings from 1608 to 1880, and a short biography of the practitioners of Baltimore, whose labors in the cause of suffering humanity endeared them to their contemporaries. We do not know of so complete a work in reference to the other cities of this country. Dr. F. H. Brown has given us an account of the members of the Massachusetts Medical Society, and we learn when they entered the profession, and have a list of their publications. Dr. Quinan tells us of those who have lived as well as of those now living, and of their works, giving a list of those who have served their country in the army and navy, and tells us of all medical institutions and boards of health. We congratulate the Medico-Chirurgical Society of Maryland on having so complete a history of members of the medical profession practicing in Baltimore, so full an account of medical publications during so long a period. The profession in Baltimore cannot be accused of neglecting to put in writing their experience and their opinions, and exhibit commendable industry in writing as in practicing. The younger members of the profession in that city have a powerful stimulus to well-doing in so many examples of patient and faithful work.

The Field of Disease. A Book of Preventive Medicine. By B. W. Richardson, M. D., etc., etc. Philadelphia: Henry C. Lea's Son & Co. 1884.

Whatever may be said in praise of the beneficence of the healing art unquestionably applies with far more than double force to the beneficence of the preventive art, or more properly, science, against disease. As soon as men allowed themselves to doubt if diseases were a portion of the necessary sufferings of humanity the first step was taken toward prevention, and that was not very long ago. Preventive medicine, in so far as it exists to-day, is, with the exception of isolated movements, such as the introduction of vaccination against small-pox, the growth of the last thirty years. Its basis rests upon a rational and reliable system of registration and of vital statistics, the development of which, in England, dates back less than fifty years. It was only last April that the name of William Farr, the founder of this system of registration, to a great degree the model for those of other countries, passed through the office of the registrar of deaths, and was added to the sixty million names whose registration had passed under this official supervision.

Just as in curative medicine there is the theory and the practice, the first step being to elucidate the nature and the locality of the disease, and the second to select, on rational principles, the appropriate remedies, so in preventive medicine we must first have vital statistics to show us when, where, and how men are sick and die before we can undertake to remove the causes of sickness and death except in so far as this may be accomplished by a fortunate empiricism.

The practitioner of to-day is looked to by his regular clients quite as much to shield them from the approach of disease as to relieve them from its consequences, and as larger demands are and will be made upon the State to prevent causes of sickness, so a gradually increasing number of medically educated men will devote themselves exclusively to that part of State medicine which falls under the head of hygiene.

In the present work the author investigates first the nature, secondly the causes, and afterwards the prevention of those calamities afflicting mankind which have received the title of diseases. In other words, he strives to trace diseases from their actual representation, as they exist before us, in their natural progress after their birth, back to their origin, then to seek the conditions out of which they spring; and, further, in investigating the conditions, to see how far they are removable, and how far they are avoidable. The curative side of medical learning thus forms part of his scheme.

The book is an octavo of 740 pages, and though

addressed to the general reader must prove a very useful one to the general practitioner. Parts of the subject, as those concerning poisons and injurious trades, have undoubtedly been much more fully dealt with elsewhere, but the book, as a whole, is a good one, and the point of view deserves still higher commendation as indicative of an excellent tendency in modern medicine.

The Diseases of Children. A Handbook for Practitioners and Students. By ARMAND SEMPLE, B. A., M. B. Cantab., M. R. C. P. London, Physician Northeastern Hospital for Children, Physician to the Royal Society of Musicians, Author of The Voice Musically and Medically Considered, Aids to Medicine, etc. New York: G. P. Putnam's Sons, 27 and 29 West Twenty-Third Street. London, 25 Henrietta Street, Covent Garden. 1884.

In the preface to his work the author seems, strangely enough, to be under the impression that he has done something original in stating that a difference exists between the diseases of childhood and those of adult life. The chapters devoted to diseases of the skin are especially unsatisfactory, though they perhaps represent pretty well the general character of the book, which is that of a compendium, possibly useful to a student preparing for an examination, but markedly deficient in important details of treatment and useful clinical facts.

A Companion to the United States Pharmacopœia. Being a Commentary on the Latest Edition of the Pharmacopœia, and Containing the Descriptions, Properties, Uses, and Doses of all Official and numerous Unofficial Drugs and Preparations in Current Use in the United States, together with Practical Hints, Working Formulas, etc. Designed as a Ready Reference Book for Pharmacists, Physicians, and Students. With over 650 Original Illustrations. By OSCAR OLDBERG, Phar. D., and OTTO A. WALL, M. D., Ph. G. New York: William Wood & Co. 1884. viii. 1216 pages.

This work, the design of which is plainly set forth on its title-page, is the latest and one of the best commentaries that the appearance of the Sixth Revision of the Pharmacopœia of the United States has yet called forth, and is issued by the publishers of that work. The illustrations are nearly all from original drawings from actual specimens. It states plainly, where any exist, the difference in strength and other respects between the last and the previous edition of the Pharmacopœia, and gives concisely the medical properties and uses of all the medicines of which it treats, with the dose. It contains practical information relative to the preparation and use of hypodermic and other injections, as well as inhalations, baths, and other forms of medication, with much other information not usually referred to in books of similar description. It contains very valuable chapters or articles upon the use of the microscope in pharmacognosy, the microscopic structure of plants, the administration of medicines, extemporaneous prescriptions, weights and measures, and specific gravity and volume. By specific volume is understood the relative volume of any weight of a substance as compared with the volume of the same weight of water. The tables given furnish convenient means of converting quantities by weight into volumes by a simple multiplication. Thus as the specific volume of glycerine, U. S. P., is 0.800, 1000 grammes of that fluid measures 800 cubic centimetres, or 1000 avoirdupois ounces will measure 800 imperial fluid ounces.

The work is one which all physicians and pharmacists would find it greatly to their advantage to have for ready reference. B. F. D.

Second Biennial Report of the State Board of Health of Iowa, for the year ending June 30, 1883.

The State Board of Health of Iowa, now in the fourth year of its existence, shows a commendable activity in its last report. Among the more important topics treated are Contagious Diseases, reports of which are tabulated from the returns of clerks and health boards throughout the State.

The distinction between reports of prevalent diseases and mortality reports are not clearly stated in the reports of some of the more recently organized health boards of States. It is encouraging to note progress in this direction in the Reports of the Iowa Board. Reports of prevalent diseases are usually voluntary, and when well done evince a desire to promote the public welfare. On the other hand, mortality reports are commonly made in response to legal enactments, as in Massachusetts, Michigan, Iowa, Rhode Island, and many other States.

Dr. Justin M. Hull, a member of the Board, contributes a paper on Ventilation, in which are briefly summed up the opinions of the best writers upon the subject.

Another paper on Hospitals for Contagious Diseases has a special value, since it reproduces in a concise form the conclusions of a recent English commission relative to the location of small-pox hospitals. It was found on inquiry that after the establishment of such hospitals in thickly-settled districts the disease occurred in their immediate neighborhood, its frequency bearing a tolerably close relation to the number of cases admitted to the hospitals, and hence the necessity for establishing them at places remote from habitations and lines of travel.

Sepulture: Its History, Methods, and Sanitary Requisites. By STEPHEN WICKES, M. D. Philadelphia: P. Blakiston, Son & Co. 1884.

The title of this book is a fair description of its contents. In writing the history of sepulture the author has taken some pains to consult such authorities as are accessible in this country. He confines himself to the duties of a historian, and does not indulge in the advocacy of a system. Much of the book is devoted to portraying the consequences of unsanitary sepulture. The question how and where the dead shall be disposed of is tersely answered in the statement that they should be so buried that the living may not suffer.

The disposal of the dead by cremation or by chemical destruction is not considered. Dr. Wickes very sensibly says in regard to this: "Each method, like the slower processes of decomposition in the earth, resolves the body into its original elements. If good hygiene made it necessary these methods would doubtless be accepted as reasonable and proper. In our

own country the question of their adoption upon sanitary grounds is not an urgent one. It may become so in the generations to come. Inhumation commends itself to the traditional sentiments of the people, and an innovation upon these is not demanded. Rural cemeteries, properly regulated, under wise control, guarded by good laws, and permanently extramural, afford all necessary protection to the public health."

Medical and Surgical Journal.

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TREATMENT OF ULCER OF THE STOMACH.

AT the Société Médicale des Hôpitaux, session of April 25th, there was an interesting discussion on the treatment of ulcer of the stomach, in which Drs. Debore, Duguet, Bucquoi, and Gerin Roze took part.

The discussion was opened by Debore, who remarked that the ordinary treatment of simple gastric ulcer by an exclusive regimen of milk and lime water, or milk and Vichy water, often fails. One of the inconveniences attending this treatment is that large quantities are required to sustain the patient, that is, a gallon a day or more, from which irritation and even dilatation may result. The attempt has been made to give an equivalent of milk in smaller volume by using milk powder or condensed milk. These preparations have not been successful in Dr. Debore's practice. The same may be said with regard to the meat powders so much employed in "gleyage" or forced feeding, which are ill borne in gastric ulceration, and often occasion vomiting. In view of this want of success, Debore asked himself if it were not possible to find some other alimentary regimen, which while nourishing the patient would suspend for a time the action of the stomach and suppress the secretion of gastric juice, whose injurious influence on the march of the ulceration is universally conceded. Certain authorities have vaunted the benefits of enemata of peptones, substituting for alimentation by the stomach rectal alimentation, but this means does not enable the organism to be sufficiently nourished, especially if it be necessary to prolong for some time feeding by the rectum.

In view of the impossibility of suppressing the secretion of gastric juice Debore has endeavored to modify its acid reaction by neutralizing it. The acidity of the gastric juice is so characteristic and so necessary for stomach digestion that one may truly say that gastric juice when rendered alkaline has lost all its properties. There is equal reason to believe that it is to this acidity that this secretion owes its power of preventing the healing of the simple ulcer. The problem, then, consists in finding how so to neutralize the gastric juice that azotized food may be given to patients in such a way that the digestion shall be accomplished, not in the stomach, but in the small intestines. With this end in view Debore administered to his patients a certain quantity of meat powder associated with a large dose of bicarbonate of soda; twenty grammes, for instance, of meat powder with ten grammes of the bicarbonate at each meal time. Several trials assured him that the theory which he had adopted was correct; on withdrawing, for example, by the flexible tube the contents of the stomach in patients to whom he had previously given the mixture of meat powder and soda he ascertained that there was no trace of peptones. He treated in this manner four patients affected with ulcer of the stomach; in all these the intolerable pains from which they were suffering and the vomiting disappeared.

At the present time Dr. Debore relies on the following procedure: During the first few days he washes out the stomach to free it of acid matters which it may contain. This operation has never in his practice provoked hæmatemesis, and is regarded as safe; he uses a soft flexible tube, whose extremity if it should hit against the seat of the ulcer could do no harm. In the next place he administers to his patients, three times a day, twenty-five grammes powdered meat, suspended in milk and mixed with ten grammes bicarbonate of soda. This mixture is administered at meal time, and by means of the stomach tube, as it is very disagreeable when taken in the ordinary way as food. The patient is given, besides, a quart of milk a day, rendered alkaline by lime water. The facts go to show that these four patients have taken every day for several months thirty grammes (one ounce) of bicarbonate of soda, and this treatment has never given rise to any of those symptoms which characterize what has been called the "alkaline cachexia."

Dr. Jaccoud, moreover, affirms that he has been able to give to certain patients for a very long time twenty grammes a day (more than half an ounce) of bicarbonate of soda without the least harm resulting. Dr. Charcot has also given from thirty to forty grammes a day of this alkali without noting any sign of cachexia. If it is well established that bicarbonate of soda long continued does not produce cachexia, it is no less true that its employment is attended with certain inconveniences; besides its disagreeable taste its action on the stomach is somewhat irritating, and by its decomposition under the influence of the digestive secretions it sets free a considerable quantity of carbonic acid, which occasions painful eructations. Another reason which has prompted Debore to seek a substitute for the bicarbonate in other alkalies is that the former by reason of its great solubility may be too speedily absorbed, and consequently fail sufficiently to neutralize the gastric juice. He has tried successively to replace the bicarbonate of soda by lime water, saccharate of lime, and magnesia. All these substances have equally their advantages and disad-

vantages, and he now uses that combination which has given the best results. At each meal, which consists of twenty-five grammes of meat powder well stirred into milk, he adds a small package containing a mixture, in about equal proportions, of calcined magnesia and bicarbonate of soda. He also orders the patient to drink each day a quart of milk to which one gramme of saccharate of lime has been added.

In the discussion which followed, Dr. Duguet did not share the opinion of Dr. Debore as to the innocuousness of lavage of the stomach in patients affected with chronic ulcer. He cited an instance of frightful hæmatemesis and death following the use of the sound, which "had produced aspiration at the surface of the ulcer," and provoked the hæmorrhage.

Dr. Gerin Roze did not agree with Dr. Debore in the affirmation that dilatation of the stomach is likely to follow a milk diet in ulcer of the stomach. Every day we see cardiac or nephritic patients put upon a milk diet, and we seldom or never witness dilatation of the stomach in such patients.

Dr. Bucquoi had never observed death from the use of the sound and from lavage in gastric ulcer; he had, however, seen the liquid siphoned out of the stomach in this operation present a decidedly bloody appearance, and he was inclined to ascribe the source of the blood, in part at least, to the aspiration produced by the sound. Hence he was disposed to be very cautious in the use of the stomach tube in these cases. As for dilatation of the stomach, he could not bring himself to consider it as the result of treatment by milk diet; all chronic affections of the stomach, whatever treatment may be pursued, are accompanied by dilatation of this organ. It is the lesion of the mucous membrane, and the paralysis consecutive to the long sojourn of alimentary substances, which causes this augmentation of volume of the stomach. He thought it proper to emphasize this fact in connection with ulcer of the stomach, because the milk treatment, which is on the whole the most certain and reliable, has been, as he believes, wrongly blamed for the dilatation which accompanies the lesion.

Dr. Debore, in closing, said that he did not pretend that the milk regimen gives rise, in all cases of ulcer of the stomach, to dilatation; there are, in fact, some patients who take their milk in small quantities at a time, and who can thus ingest several quarts a day without danger; there are others who have only two or three meals a day, and who drink a bowlful or two of milk at a time, thus forcibly dilating their stomachs. He has, moreover, seen a number of cases of dilatation of the stomach in which the dilatation disappeared when the dietary regimen was modified, and this fact he regarded as in striking confirmation of his thesis.

— At a collision on the New York Central and Hudson River Railroad, near Rochester, on the night of May 22d, unusual nerve was displayed by Frederick Parish, a sleeping-car conductor, who, finding his right arm so crushed as to render its loss certain, coolly ligated the limb near the shoulder-joint with a strap, and amputated it just below with his pen-knife.

THE CEMETERIES AND WATER-SUPPLY OF PANAMA.

THE sanitary condition of such a city as Panama, situated as it is upon one of the great natural highways of the world's commerce, should be at all times a matter of more than local concern and importance, but its bearing upon health and disease in other countries become much more intimate with the prosecution of the work upon the interoceanic canal and the employment upon the isthmus of large numbers of laborers. It is well known that Panama itself has a very trying climate and is a very dirty city. The picturesque impression received when approaching by water is rudely dispelled upon entering the streets. It will probably be long before the unwholesome operations of nature and custom are antagonized by public conscience awakened to hygienic laws. There are, however, two conspicuous and correlated sources of the propagation and dissemination of disease at Panama which are as patent and amenable to correction as they are loathsome, — we mean the cemeteries and the water-supply. The present condition and dangers of these have been described before in these columns in plain language, and we reproduce the following paragraph from a letter by Dr. Heffenger, written in March, 1882, from Panama, and published in the JOURNAL of April 20th of that year: —

"One who has not traveled through Spanish America can form no idea of the happy-go-lucky, indifferent, and general slip-shod state of government. Records are seldom kept, and when they are, cannot be relied upon. After vainly seeking mortuary statistics from physicians and public officials, I paid a visit to the various cemeteries, and by overhauling burial books and questioning the keepers, ascertained that the Catholic (native) interments amount to one hundred monthly, and the foreign to ten, giving an annual death-rate of eighty-eight per one thousand. Of these deaths at least one half are due to malarial (yellow?) fevers, one fourth to small-pox, and the remainder to pulmonary and intestinal diseases, syphilis, accidents, etc, etc. I carefully inspected the cemeteries, and cannot pass on without remarking upon the largest one, the immediate property of the bishop. It was built by the Spanish government nearly two hundred years ago upon a boggy piece of land, a mile to the westward of the city. It consists of three hundred and sixty-five niches arranged in three tiers, forming a hollow square. Only the wealthy can indulge in this ultimate luxury, and upon the demise of one of these favored sons of fortune the body is deposited in one of the niches, sealed up by a suitably engraved tablet, to remain so long as cadaveric rent is paid to the church; but let the defunct's relatives fail to satisfy its rapacious demands, and soon the remains in its coffin is tossed into the swamp, just to the rear of the cemetery, where at all times may be seen the unsightly remnant of ancient and recent dead, old Spanish hidalgos, proud doñas, fair señoritas, and new-born babes lying in a promiscuous heap of putrescence ten feet high, their white staring, tongueless skulls mutely protesting against

such barbaric desecration of the dead. My nerves are well tempered, but I confess this sight filled me with uncontrollable disgust and repugnance. Such a constant source of disease germination and dissemination within a mile of the city, of course, must contribute greatly to its unhealthfulness. Will the new health authorities dare interfere with this right of the church? I think not."

The same story is told, though more at length, in a letter to the *Panama Star and Herald*, April 5, 1884, from Dr. Wolfredhelson, late member of the Panama Board of Health. The statements of the letter are editorially indorsed, and show plainly enough that the conditions portrayed are no better, if not worse, than when our correspondent wrote, and verify his prediction that the old church would prove too strong for the young Board of Health. While the Jewish, the Chinese, and the "foreign" cemeteries are in excellent order, and offer nothing for comment or censure, the two native cemeteries — that owned by the bishop and rented in niches to the rich, and that used for general burial of the poor — offer nothing for commendation, and offend all the senses. In regard to the general cemetery it is simply necessary to state that it covers only three fourths of an acre of ground for an increasing population of 20,000 people, and that it is dug over at least once every year, to give an idea of the centre of disease which it must be.

The condition of the church cemetery is even worse than described by our correspondent, for in September, 1882, an earthquake loosened the walls, and cracked many of the *bovedas* or niches, which in the climate of Panama are veritable ovens filled with putrescent humanity — as long as rents are paid. But the poisonous influences of these two cemeteries are not confined to the air; within a few hundred feet of each of them are wells from which water is drawn and sold for drinking purposes through the city, and from which washerwomen draw their supplies for cleansing and infecting the soiled linen of the inhabitants.

The correspondents of the *Star and Herald* may well exclaim: "This whole isthmus wants sanitary reform, at once, to make it a fitting place for human beings to live on, and to prepare it for the great future that lies before it. Let us hope that some plan of combined wisdom and hygiene will bring about such an ending. Humanity and science demand it."

MEDICAL NOTES.

— It is a wonder that a competent, sensible practitioner has any respect for humanity at all. People are constantly revealing their nonsense in medical matters to him, and he has to grin and bear it as best he may. He finds himself supplanted by a man he knows to be a quack, and is assailed with a series of therapeutic experiences by a larger percentage of the elderly females he is thrown in contact with that is calculated to set an unhardened man crazy. The separation of the true from the false among physicians is truly one of the great social problems. — *St. Louis Globe-Democrat.*

— Our readers doubtless remember an article in an English periodical some time since, by Frances Power Cobbe, making the most sweeping charges of immorality and licentiousness against the medical profession. It has generally, and with reason, been considered beneath the notice of the profession at which it was aimed. But the somewhat inflammable Mr. Punch (whose heart, despite his kyphotic malformation, seems to be in the right place) thus vents his feelings: —

> "She shames her sex, who charges with false tongue
> A great profession with all license lewd:
> Doctors disdain — their withers are unwrung —
> The stingless insults of a prurient prude!"

NEW YORK.

— The twenty-fifth annual commencement of the Long Island College Hospital was held at the Brooklyn Academy of Music Wednesday evening, May 21st, and degrees were conferred upon forty-four candidates. The valedictory was delivered by George L. Hutchinson, and the address to the graduates by the Rev. Albert J. Lyman.

— At a hearing of two large companies before the Brooklyn Board of Health on the charge of poisonous adulteration of coffee, held May 17th, Dr. Elias E. Bartley, chemist to the department, made an elaborate report in which he stated that at the works of one of them the following coloring agents were used: French chalk, gum arabic, charcoal from wood, drop black, yellow ochre with a mixture of clay and hydrated oxide of iron, chrome orange, celestial blue, and turmeric; and at the other: Venetian red, yellow ochre, quinia, indigo, indigo extract (a sulphate of indigo, or indigo carmine), and Persian berries with ochre. Of these coloring matters, he said, chrome orange and celestial blue should be prohibited at once. The others, while not so injurious as these, were used to deceive the public, and should be regarded as adulterations. Coffee which had become spoiled or discolored from sea water, or in any way rendered unsalable, was sent to these mills and made to appear like a good article, and green and unripe coffees was there given the brown color of age and rushed into the market. On examination of the coffees themselves lead was found to adhere in considerable quantity to the pans, and the examination of twenty samples of polished coffee from the market showed that the use of Prussian blue, as well as lead, was very common in coloring coffee. After a prolonged discussion of the matter, Health Commissioner Raymond decided to issue an order prohibiting the use in coloring coffee of chrome yellow or orange or any substance containing lead, celestial blue, or Prussian blue.

— The steamship Polaria arrived from Hamburg on the 23d of May with five cases of small-pox on board, and was detained at quarantine. The surgeon stated that on May 19th the first case was discovered, and that though the patient was immediately isolated, three other cases developed the same day. No other case was noted until the day the port of New York was reached, when one additional case developed. All the ship's passengers were immigrants. The five small-pox patients were sent to the Riverside Hospital on Blackwell's Island, and all the other immigrants were

at once vaccinated. The immigrants will be kept on the ship (which was thoroughly fumigated) until all danger of their communicating the disease is over.

— In the amphitheatre of Bellevue Hospital, on May 22d, Dr. William F. Fluhrer, one of the visiting surgeons, described before a number of the profession a successful operation for the removal of a pistol-ball from the brain through a counter-opening in the skull, and exhibited the patient upon whom the operation was performed. The patient shot himself in the forehead with suicidal intent, and hemiplegia with a semi-comatose condition was caused by the injury. Dr. Fluhrer ascertained the direction of the ball by probing, and then extricated it by means of a counter-opening made at the back of the head, after which drainage was secured by passing a rubber tube through the entire wound. The paralysis gradually cleared up, and the patient is now, three months after the shooting, in apparently excellent health. An unpleasant feature of the demonstration was the publicity given to it, as an account of it appeared in all the daily papers.

— The late Matthew Vassar left in his will a considerable sum of money for the erection and endowment of a hospital at Poughkeepsie on condition that his brother, John Guy Vassar, should contribute an equal amount. The latter willingly consented to do so, and having taken an active interest in the matter the arrangements have now been nearly completed for the establishment of the institution. The trustees have purchased an entire block in a desirable location, and the plans and specifications for the buildings, which will be of brick trimmed with terra cotta, have been agreed upon, and proposals invited for the work of construction. The name will probably be the Vassar Brothers' Hospital.

Correspondence.

CONTAGIOUSNESS OF TYPHOID.

ASTORIA, OREGON, *April* 29, 1884.

MR. EDITOR, — It is a matter of astonishment to me that so much difference of opinion should exist in regard to the contagiousness of enteric fever, when so many medical men have seen cases about which the evidence is as strong as any proof can be to establish the fact.

On the 18th of December my son was brought home with typhoid fever, having been sick three weeks, four days only having been spent in bed previous to his return. He drank water from a well which was dug through sandy soil which was within a few feet of the door of a boarding-house kitchen, from which slops had been thrown for many years. Four other cases occurred in the family with whom he boarded, and no case had ever been in the house before. The well had been dug three months. A beef had been killed within forty feet of this well a few weeks before. My son was put into a well-ventilated room, and no precautions were neglected to disinfect the discharges and keep the patient and his room clean. The discharges were buried immediately. The water which was used for cooking and drinking purposes was taken from a tank, and this was continually supplied by rain. There was no possible way for the water to become contaminated by fæcal matter. The rest of the family were kept out of the sick-room as much as possible, though when the young man died, which he did in seventeen days from perforation of the bowel in consequence of his having, contrary to my directions, been allowed to get upon the night chair, his brothers gathered around him, and kissed him. Three weeks after a boy twelve years of age was attacked, and was sick five weeks. Two weeks after this one left his bed a boy aged sixteen and one six were attacked, and remained in bed six weeks. The eldest had diarrhœa three or four days, the younger one was constipated during the whole time. The fever was continued for four weeks, and then became intermittent rather. Rose spots were distinct.

The treatment was a *great abundance of air from the Pacific Ocean through the windows*, the temperature being modified by a fire in the room, milk, *coffee* instead of alcohol, and *warm baths*. Injections of tepid water were used to open the bowels, and when this failed I had to give two compound cathartic pills at night, which were followed by one stool the next day. These were given *late in the disease*, however, *after all tenderness had gone*.

It is an opprobrium upon our profession that such vast difference should exist in the opinions of medical men in regard to the treatment of this disease, and as to how it is propagated.

Very truly yours, T. T. CABANISS, M. D.,
Late Acting Assistant Surgeon, U. S. A.

RETAINED PLACENTA OF ABORTION.

NEWTON, *May* 10, 1884.

MR. EDITOR, — The discussion in your columns of this week upon retained placenta of abortion leads me to say — what I have often said to medical friends — that I have followed a uniform scheme of treatment with such cases for the last thirteen years; a scheme not of direct interference, but, as I may say, of expectant and protective treatment. I cannot remember that I have had a case that did not turn out well in the end. I have had cases that kept me anxious for days together, — and of what other line of practice must not this be said? — but they turned out right.

Given an abortion at about three months in a reasonably intelligent and obedient patient; the fœtus has been discharged, the secundines retained, and the womb is closed against all but forcible dilatation. The condition to be controlled is hæmorrhage, and this can be controlled. I have reason to know that septicæmia, under these circumstances, is an exceedingly rare condition, and have reason to believe that it is more rare than many physicians think. Thus far I have never seen a case, and I suppose in the thirteen years I have had as much experience in this trying complication — early abortion — as falls to the lot of the average general practitioner.

For the hæmorrhage, present or expected, the patient is instructed to lie quietly in bed, and told how to use suppositories, with which she is provided, the suppository being of *vaginal* size, and made of pure butter of cocoa containing each a scruple of tannin. When the hæmorrhage occurs these, one or two at a time, are passed well up to the os uteri; a firm clot is speedily formed, and thus a soft but effective tampon pro-

vided, which is, in a measure, antiseptic also. This can be broken up and removed at any time, but I have generally found it better to allow it to remain, a new suppository being forced in whenever bleeding returns until, finally, the whole contents of the vagina are expelled with the fœtal envelope attached to its upper portion.

Subordinate points of treatment, for example, the use of ergot, opium, food, stimulant, etc., require careful attention, but do not need to be detailed.

I am disposed to defer to my friend, Dr. Mundé, on matters of gynæcology, but I am also disposed to believe that Dr. Mundé would make less of a task of opening and evacuating a uterus which is high up, is in an early stage of evolution, and is obstinately closed, than I should. Moreover, I think I recognize on the part of the present school of gynæcologists an undue tendency to suggest surgical device, and resort to surgical interference.

Yours faithfully, HENRY M. FIELD.

Miscellany.

THE HISTORY AND PRESENT STATUS OF THE WAVERLEY CONVALESCENT HOME.

IT is always pleasant to notice favorable observations upon our own institutions from the pen of foreigners. We therefore extract from the *Lancet* the following notice by Mr. Burdette, secretary of the General Hospital Fund in London, in regard to the Convalescent Home of the Massachusetts General Hospital at Waverley: —

"The first convalescent institution ever established for hospital purposes in America was opened on April 25, 1882. It is called the Waverley Convalescent Home, and is worked by the trustees of the Massachusetts General Hospital. This home has been erected from a fund of $100,000, which was specially raised for this purpose, $30,000 being spent on the building and furniture, and $70,000 being invested as an endowment fund for the permanent maintenance of the home. The home is intended mainly for the use of the patients at the Massachusetts General Hospital, and both free and paying patients may be admitted. It contains thirty beds for patients, and has two wards of nine beds each, one with three beds, two with two beds, and four single-bedded rooms. The proportion of accommodation for paying to free patients is about one to five, but as the object of the trustees is first to benefit the poor who are unable to pay the expense of procuring fresh air and change, so far none but free patients have been received. This is remarkable, and shows how easily the combined pay and free system works in the general hospitals of America. The whole arrangements at the Waverley Home are admirable, and the cheerful and cleanly appearance of everything fills the visitor with gratification. Every ward, every room, every office, from roof to basement, is admirably arranged and perfectly kept. Indeed, I have never seen a more model institution than the Waverley Convalescent Home. The sanitary arrangements have been very carefully planned, and reflect great credit upon Dr. Whittemore, the able superintendent of the Massachusetts General Hospital. Waverley is about seven miles from Boston. The country around is hilly and well wooded, and the site selected for this convalescent home is a singularly beautiful spot. With all the progressive genius for which the Americans are famed, for some unexplained reason they have not heretofore recognized the advantages of convalescent hospitals. This, the first convalescent home in America, is well worth a visit, and I have little doubt many others will soon be erected."

ABDOMINAL SECTION FOR EXTRA-UTERINE PREGNANCY.

DR. ANGUS MACDONALD opened the discussion before the Edinburgh Obstetrical Society[1] on the recent paper of Dr. Freund on Extra-uterine Pregnancy by a report of two cases of his own, in one of which he operated; the account of this operation is of much interest. The menstruation of the patient ceased in October, 1882. The other symptoms of pregnancy followed. In April, 1883, while working hard she overstrained herself, and had pains like those of labor, followed by swelling of the abdomen and a deep-seated pain in its lowest part. A sanguineous discharge from the vagina ensued with swelling of left leg from the ankle to the hip.

Physical examination in May showed the abdomen generally distended. Resonant all over, except just above the symphysis pubis and toward the right flank, where it is relatively dull. Left flank was quite clear. Measurement round umbilicus thirty-three and three fourths inches.

The vagina was short; the uterus was depressed, the vaginal portion being soft and enlarged like that of a pregnant uterus. There was a tender fullness in the pouch of Douglas. In the right and left fornices, on deep pressure, a rounded mass could be felt. Sound entered five inches, and communicated a feeling of increased resistance as it passed over the endometrium.

A large semi-elastic mass projected into the pouch of Douglas flattening the rectal wall and giving rise to great pain when touched.

During the summer the patient occasionally passed blood and pus per rectum, and though the tumor remained without essential change she was tolerably comfortable, except for some abdominal pain when she attempted to move. In September it was deemed advisable to interfere actively in spite of the fact that there had been evidence of communication between the fœtal sac and the bowel. This communication appeared then to have closed.

The operation was performed October 9th, and after the incision was made it was found that the remains of the fœtus were attached to the right and posterior aspects of the abdominal wall. What appeared to be an abdominal adhesion of the cyst was torn asunder, and the bones of the skull, laid bare by this means, were removed. When this apparent cyst was drawn forward, it was found to consist of about five or six inches of the small intestine, the walls of which, where they lay in relation to the abdominal walls, were thick, softened, and almost gangrenous. In the cavity in which the bones of the fœtus lay there was a considerable amount of fæcal matter. A loop of intestine which was adherent to the part above mentioned was carefully separated from the rest, and was found to contain a fæcal fistula. The

[1] Edinburgh Medical Journal, February, 1884.

whole of the rest of the contents of the cavity in which the fœtus lay were now removed carefully, and the cavity sponged out. The portion of the intestine already mentioned, whose wall formed part of the cyst, was now cut out, and the healthy ends of the bowel brought together as completely as possible by a continuous catgut suture, care being taken to approximate the raw edges completely without including any of the mucous membrane. The stitches were passed very close to one another, and this part of the operation took up a considerable time. The gap in the mesentery was also brought together by continuous sutures.

During this part of the operation there was some hæmorrhage, which was, however, completely arrested by the pressure of the sutures. The edges of the fæcal fistula above referred to, having been thoroughly refreshed, were carefully brought together by catgut suture.

The abdomen was now sponged dry and the wound closed, a large India-rubber drainage tube being introduced at the lower angle of the wound, so as to extend to the bottom of the cyst, and secured in position by passing one of the deep sutures through its texture.

The subsequent progress of the case was favorable in the main, in spite of a fæcal discharge for a few days from the situation of the drainage tube. She left the hospital in good health January 9, 1884.

SCARLATINA CO-EXISTENT WITH TYPHOID FEVER.

THE following case of scarlatina combined with typhoid fever is reported by Dr. Pinnock, of Victoria, in the *Australasian Medical Gazette* for October, 1883: "During the typhoid fever epidemic which occurred in this city last autumn two out of four children in one family were attacked insuccession, an interval of a fortnight elapsing between the onset of the fever in the two cases. The one first attacked, when convalescent, was sent away to the sea-side. When the other (aged six) was still in bed on the 29th May, that being the seventeenth day of the fever, the temperature being 100.1° F., my attention was drawn to his brother (aged four), who, on account of the limited accommodation of the dwelling, slept in the same room. He was suffering from sore throat, high temperature, well-marked scarlatina rash, etc., and subsequently endured a severe attack of the complaint. I did not separate the two, partly because from my experience of the rapid infection of scarlatina I considered it too late to do so, and partly because the only other available room was occupied by the eldest child, a girl aged nine. She, however, also manifested well-marked scarlatina anginosa on the following day (30th May), and on the same day the typhoid-fever patient had sore throat and glandular enlargement, and the next day (31st) he had the scarlatina rash, well out, and typical tongue. His temperature rose a degree when the sore throat attacked him. Next day it was 100.7° F. On the third day (2d June) the rash began to fade, the temperature being 100.1° F. On the third of June the temperature was normal (this according to my calculation, would be the twenty-second day from the onset of the typhoid fever), and continued normal afterwards. The rash disappeared entirely on the 6th of June, and he went through the usual desquamative process. Although convalescence was protracted, he eventually made a good recovery."

"I think there is little doubt that this case was one of double poisoning. In a recent discussion at the Clinical Society of London, Dr. Broadbent held that scarlet fever and typhoid were frequently concurrent. Other speakers, including Dr. Whipham, Sir William Jenner, Dr. Mahomed, Dr. Carafy, and Dr. Andrew Clark, narrated various red rashes occurring in enteric fever which had been mistaken for scarlatina. But from the symptoms and general surroundings of the case above reported I am compelled to regard it as one of co-existent typhoid fever and scarlatina. Scarlatina has already been shown to have occurred concurrently with typhus, proving the possibility of dual poisoning in that disease; why not, therefore, with typhoid also?"

FOOT-BALL ACCIDENTS.

CASUALTIES have again been frequent among foot-ball players during the past week or so. In one case it is to be feared that a fatal termination will result, it being stated that the spine was fractured. Those who approve of the game as played in the present rough-and-tumble manner must rejoice in the termination of a recent match at Oldham. From the commencement of the game much ill-feeling was apparent. In consequence of a decision of the referee one of the sides left the field, amidst the greatest uproar, and free fights were indulged in "all over the ground." The retiring side were not permitted to make their way to the dressing-room, stones and mud being freely thrown at them, while they "were in other ways assaulted." This is not the first account that has reached us of a foot-ball match degenerating into a riotous and disorderly bear-fight, the tempers of the players having evidently been aroused by the uncontrollable brutalities and roughness of the pastime. Advocates of the present system of playing the game speak highly of the manly qualities it calls forth. We reiterate that we fail to see any manly quality evoked by it. It is manifestly a game in which the stronger and heavier side has an advantage over weaker antagonists. It is, moreover, one in which injuries are frequently received which render the player incapacitated for life, and, as a consequence, too often a burden and a dependent upon his relatives for support. The selfish indulgence in an amusement which may bring such misery into a household is not, to our minds, the highest ideal of manly prowess. Certainly no man should unnecessarily expose himself to dangerous accidents unless he has adequate means of support in the event of his becoming crippled for life. Lastly, a game can hardly be considered manly which leads to constant disputes and appeals to the referee, whose decisions are not unfrequently challenged, and, as at Oldham, ends in a free fight and the disgraceful treatment at the hands of the spectators of the side visiting the town. There are many ways in which foot-ball might be much improved. It could be made more simple, and thus many disputes which now give rise to much bitterness would be avoided. By stopping the handling of the ball and running with it (in the "Rugby" game) the dangerous form of accidents would be rendered less frequent; and if it could be so devised that the kicks fell more on the ball and less on the shins of the players the game would become more skillful and less brutal and dangerous. — *Lancet*, March 22, 1884.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 17, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	616	208	16.96	16.16	2.56	4.48	3.04
Philadelphia	927,995	361	122	14.84	11.48	2.77	2.77	5.88
Brooklyn	644,526	213	17	17.86	14.10	2.82	6.58	3.76
Chicago	632,100	229	132	29.25	6.75	6.30	9.00	2.70
Boston	423,800	150	46	13.99	17.99	5.28	2.50	2.50
Baltimore	408,520	138	62	27.74	13.87	3.65	1.46	1.46
St. Louis	400,000	105	35	15.20	18.05	4.75	1.90	1.90
Cincinnati	272,400	75	22	9.31	22.61	1.33	—	—
New Orleans	234,000	152	52	25.62	15.77	4.59	.66	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	75	33	18.55	17.29	—	6.65	—
Milwaukee	142,400	52	25	17.28	6.50	1.92	5.76	1.92
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	15	1	26.66	26.66	—	—	20.00
Nashville	54,400	15	1	13.33	33.33	—	—	6.66
Charleston	52,286	32	9	—	6.24	—	—	—
Lowell	71,447	22	5	4.55	18.20	—	—	—
Worcester	69,442	19	5	10.52	15.78	—	—	—
Fall River	62,674	23	10	17.40	17.40	—	8.70	4.35
Cambridge	60,995	21	5	4.76	14.28	—	4.76	—
Lawrence	45,516	15	6	—	20.00	—	—	—
Lynn	44,895	21	4	4.76	23.80	—	4.76	—
Springfield	38,090	8	2	25.00	25.00	—	12.50	12.50
Somerville	31,350	6	0	16.66	33.33	—	—	—
Holyoke	30,515	8	1	12.50	37.50	—	12.50	—
New Bedford	30,144	19	3	10.52	15.78	—	5.26	—
Salem	29,503	7	0	—	28.56	—	—	—
Chelsea	24,347	10	1	20.00	10.00	—	—	10.00
Taunton	22,693	5	1	—	40.00	—	—	—
Gloucester	21,400	10	3	10.00	10.00	—	—	—
Haverhill	20,905	3	1	—	—	—	—	—
Newton	19,421	4	0	—	25.00	—	—	—
Brockton	18,323	4	1	—	25.00	—	—	—
Malden	15,273	3	1	—	33.33	—	—	—
Newburyport	13,947	5	2	—	—	—	—	—
Fitchburg	13,433	—	—	—	—	—	—	—
Eighty-six Massachusetts towns	363,419	89	16	11.24	17.98	—	3.37	3.37

Deaths reported 2530 (no reports from Buffalo, District of Columbia, and Providence): under five years of age, 892; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 440, consumption 381, lung diseases 295, diphtheria and croup 106, scarlet fever 73, diarrhœal diseases 60, measles 57, typhoid fever 36, malarial fevers 29, whooping-cough 25, small-pox 16, cerebro-spinal meningitis 15, erysipelas 14, puerperal fever eight, typhus fever one. From *measles*, New York, Chicago, and New Orleans 13 each, Baltimore nine, Pittsburg seven, Brooklyn and Somerville one each. From *typhoid fever*, Philadelphia 15, Chicago four, Baltimore three, New York, Cincinnati, New Orleans, and Milwaukee two each, Boston, New Haven, Nashville, Lowell, Gloucester, and Waltham one each. From *malarial fevers*, New York nine, Chicago, Baltimore, St. Louis, and New Orleans four each, Brooklyn three, Cincinnati and Charleston one each. From *whooping-cough*, New York 10, Baltimore four, Brooklyn three, Philadelphia, Boston, and Pittsburg two each, St. Louis and Worcester one each. From *small-pox*, New Orleans 11, Philadelphia four, Cincinnati one. From *cerebro-spinal meningitis*, Chicago and Chicopee three each, St. Louis and Cincinnati two each, Baltimore, Milwaukee, Worcester, and Fall River one each. From *erysipelas*, New York six, Baltimore three, Brooklyn two, Philadelphia, Chicago, and Boston one each. From *puerperal fever*, New York, Brooklyn, Boston, Baltimore, New Orleans, Milwaukee, New Bedford, and Chelsea one each. From *typhus fever*, New York one.

Three cases of small-pox were reported in Cincinnati, St. Louis two; scarlet fever 10, diphtheria two in Milwaukee; scarlet fever 44, diphtheria 25, typhoid fever six, and measles three in Boston.

In 103 cities and towns of Massachusetts, with an estimated population of 1,409,314 (estimated population of the State 1,955,104), the total death-rate for the week was 16.35 against 15.88 and 13.67 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending May 3d, the death-rate was 22.7. Deaths reported 3804: acute diseases of the respiratory organs (London) 360, whooping-cough 173, measles 172, scarlet fever 94, fever 36, diarrhœa 33, diphtheria 17, small-pox (London 10, Liverpool four, Hull and Sunderland two each, Birmingham, Sheffield, and Newcastle one each) 21. The death-rates ranged from 15 in Hull to 29.3 in Wolverhampton; Leicester 16.5; Newcastle-on-Tyne 19.3; Bradford 19.9; London 22; Birmingham 22.2; Sheffield 23.1; Sunderland 24 6; Manchester 24.7; Liverpool 25.2; Blackburn 25.5; Nottingham 25.7; Leeds 28.5. In Edinburgh 20.7; Glasgow 27.4; Dublin 31.5.

For the week ending April 26th, in 170 German cities and towns, with an estimated population of 8,907,985, the death-rate was 25.9. Deaths reported 4438; under five years of age, 1972; consumption 687, lung diseases 568, diphtheria and croup 211, diarrhœal diseases 162, scarlet fever 63, measles and rötheln 52, whooping-cough 47, typhoid fever 42, puerperal fever 24, small-pox (Leipzig and Metz one each) two. The death-rates ranged from 16.3 in Potsdam to 39.3 in Essen; Königsberg 34.4; Breslau 32.8; Munich 36.8; Dresden 23.1; Berlin 25.8; Leipzig 25.6; Hamburg 25.5; Cologne 27.3; Frankfort a. M. 16.8; Strasburg 33.8.

For the week ending May 3d, in the Swiss towns, there were 40 deaths from consumption, lung diseases 40, typhoid fever 31, diphtheria and croup 11, diarrhœal diseases nine, scarlet fever five, erysipelas four, whooping-cough three, puerperal fever one. The death-rates were, at Geneva 22.4; Zurich 31.5; Basle 23.2; Berne 28.9.

The meteorological record for the week ending May 17th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
May, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 11	29.776	53	64	47	62	42	77	60	W	W	NW	17	16	12	C	O	C	—	—
Mon., 12	30.007	47	62	44	60	43	49	51	NW	NW	NW	17	23	5	C	F	O	—	—
Tues., 13	29.767	47	59	42	71	84	75	77	NW	SE	SE	12	15	15	C	C	R	—	—
Wed., 14	29.824	58	55	42	100	82	98	93	E	NW	S	20	15	3	R	F	C	—	—
Thurs., 15	29.670	56	70	42	58	45	89	64	W	W	SW	12	7	8	C	O	O	—	—
Fri., 16	29.565	54	68	45	60	54	73	62	S	W	NW	9	14	7	O	F	C	—	—
Sat., 17	29.650	51	62	41	66	75	75	72	W	W	W	12	11	12	C	O	C	—	—
Mean, the Week.	29.751	52	63	43				67										15.30	0.76

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MAY 17, 1884, TO MAY 23, 1884.

WILSON, GEORGE F., first lieutenant and assistant surgeon. Ordered to proceed to Fort Canby, Washington Territory, for temporary duty at that post, relieving Assistant Surgeon W. O. Owen, Jr., U. S. A., who will report in person at these headquarters for further orders. Paragraph 5, S. O. 62, Headquarters Department of Columbia, May 12, 1884.

STERNBERG, GEORGE M., major and surgeon. Relieved from duty in Department of the East, and ordered to report to the Surgeon-General of the Army for temporary duty. Paragraph 2, S. O. 115, A. G. O., May 17, 1884.

MAGRUDER, DAVID L., lieutenant colonel and surgeon. Ordered to be relieved from duty as medical director, Department of the Missouri, and to proceed to Philadelphia, Penn., and assume duties of attending surgeon and examiner of recruits in that city.

FRYER, BLENCOWE E., major and surgeon. From Department of Missouri to Department of Dakota.

EWEN, CLARENCE, captain and assistant surgeon. From Department of Missouri to Department of Platte.

STRONG, NORTON, first lieutenant and assistant surgeon. From Department of Platte to Department of Missouri. Paragraph 7, S. O. 115, A. G. O., May 17, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 24, 1884.

MARTIN, W., assistant surgeon, ordered to U. S. S. Constellation.

NELSON, H. C., medical inspector, granted leave of absence for one year.

BALDWIN, L. B., passed assistant surgeon, detached from U. S. S. Pensacola, and waiting orders.

WELLS, H. M., surgeon, ordered to Naval Hospital, Brooklyn.

J. M. MURRAY, passed assistant surgeon, detached from U. S. S. Minnesota, and ordered to U. S. S. Passaic.

WAGGENER, J. R., passed assistant surgeon, ordered to U. S. S. Hartford.

OBITUARY.

PROF. J. B. DUMAS, member of the Académie de Médicine of France, has recently died at an advanced age. He was the author of numerous scientific works, and was an eminent authority in matters of chemistry. In the character of his life-work, the seat of his professorship, and the time of his decease he was closely associated with another distinguished chemist, CHARLES ADOLPHE WURTZ, who died in Paris May 12th. Wurtz was born in Strassburg, November 26, 1817, became chief of the chemical department in the medical faculty at Strassburg in 1839, and took his degree there in 1843. Subsequently he was connected with institutions in Paris and Versailles. After the death of Orfila in 1853, and the retirement of Dumas in 1854, their chairs were united in that of medical chemistry, and given to Wurtz. In 1856 he became a member of the Medical Academy, in 1866 Dean of the Faculty of Medicine, and in 1867 of the Academy of Sciences, at whose suggestion the biennial prize of 20,000 francs had been awarded to him in 1865. On December 3, 1875, he submitted to the French Academy the first specimen of gallium, a new metal discovered by Lecoq De Boisbaudran. He was the author of many valuable volumes on chemistry.

BOOKS AND PAMPHLETS RECEIVED. — A Text-Book of Pathological Anatomy and Pathogenesis. By Ernst Ziegler. Translated and Edited for English Students by Donald MacAlister, M. A., M. B. Part II. Special Pathological Anatomy. Sections I.–VIII. London: Macmillan & Co. 1884.

Some Recent Theories regarding the Pathogeny of Sympathetic Ophthalmia, viewed from a Macroscopic Stand-point. By Samuel Theobald, M. D. (Reprint from Arch. f. Ophthalmology.) 1884.

New York and Brooklyn Formulary of Unofficial Preparations. Published by a Joint Committee of Delegates from the College of Pharmacy of the City of New York, etc. College of Pharmacy Building, New York.

Clinical Notes on Cancer, its Ætiology and Treatment. With special reference to the Heredity Fallacy, etc. By Herbert L. Snow, M. D. (Lond.), etc. London: J. & A. Churchill. 1883.

On Malignant Disease, Sarcoma, and Carcinoma of the Larynx. By Henry T. Butlin, F. R. C. S. London: J. & A. Churchill. 1883.

Seventeenth Report of the Medical Staff of St. John's Hospital, Lowell, Mass. 1884.

The Philosophy of Manipulation in the Reduction of Hip and Shoulder Dislocations. Read before the American Surgical Association, 1884. By Moses Gunn, M. D., A. M., LL. D. (Reprint.) Chicago. 1884.

Vaccination: its Necessity, Control, Efficiency, and Safety. Prepared by Eugene Foster, M. D., Augusta, Ga., Chairman of the Committee of the American Public Health Association on Compulsory Vaccination. (Reprint.) Concord, N. H. 1884.

Twenty-Sixth Annual Report of the Washingtonian Home, located at 41 Waltham Street, Boston. 1884.

The New Science of Medicine. By Norman Bridge, M. D. Doctorate Address at Forty-First Annual Commencement, Rush Medical College, Chicago. February 19, 1884.

What and Why. Some Common Questions Answered. Boston. 1884.

Clinical Observations on the Use of Jequirity in Ophthalmia. By H. Knapp. (Reprint, Archives of Ophthalmology.) 1884.

Prospectus of a New Work on Physiology entitled Natural Philosophy of the Body, or the Mechanics in Respiration, Circulation, Absorption, etc. By William H. Triplett, M. D., New York.

Mechanical Principle in the Circulation in the Embryo; Placental Souffle the Analogue of Respiration. [Examples of foregoing Work.] (Reprint from Gaillard's Medical Journal.)

On Dupuytren's Finger-Contraction: its Nervous Origin. By Robert Abbé, M. D. (Reprint from New York Medical Journal.)

Original Articles.

HYSTERIA, AS AFFECTED BY REMOVAL OF THE OVARIES.[1]

BY G. L. WALTON, M. D.

IT is not the object of this paper to discuss oöphorectomy, as such, either from the surgical or the moral point of view, but to consider the question of hysteria as benefited or not benefited by the operation. This operation having, in the face of persistent opposition, forced itself into recognition on purely gynæcological grounds, the neurological aspect of the subject seems now to attract considerable attention, and its importance is not inconsiderable.

That all sorts of reflex nervous symptoms accompany diseases of the uterine appendages is a well-recognized fact. Similar symptoms appear, to be sure, in women with normal reproductive organs, and even in men, facts which have led to the depreciation of the uterine origin of hysteria to that degree that we sometimes meet with the statement that hysteria is *always* a constitutional disease, having no relation whatever to the pelvic organs. Now, although this is undoubtedly the usual character of the disease, there are certainly many cases in which hysteria occurs in persons possessing no constitutional tendency to nervous trouble, the symptoms dating accurately from disease of the pelvic organs. In view of these cases we must take a step backwards towards the ancient view that all hysteria arose from uterine disorder, substituting, however, probably here the ovaries for the uterus as the seat of original irritation. It becomes of practical importance to consider this subject carefully, for if hysteria exists in a given case of pelvic disease in which operation is proposed, and if the hysteria is considered to be dependent on the ovarian irritation, there will be an additional indication for removing the offending organ. Indeed, if the hysterical symptoms reach a certain degree in such a case they may alone furnish sufficient cause for the operation. One finds not infrequently among reported cases of Battey's operation the statement that the reflex nervous symptoms were relieved. Detailed accounts of such symptoms are, however, not common, and it seems probable that among these cases typical and measurable symptoms of hysteria, such as hemianæsthesia, would be oftener found if oftener sought. As a rule, however, the nervous symptoms have occupied the background, the important indication for operation being generally the dysmenorrhœa.

The question of removal of the ovaries for hysteria alone has now been broached, and has already been practically tested with results diametrically opposed.

As an example of unsuccessful operation may be cited the case of Landau and Remak,[2] in which both ovaries were removed on account of hystero-epilepsy, combined with hysterical hemianæsthesia. The ovaries were found normal, and the nervous symptoms were not alleviated in the least. These writers express, therefore, the opinion that the operation for hysteria is unjustifiable, and that the tenderness existing over the ovaries in this disease is merely a hyperæsthesia symptomatic of the general nervous irritability rather than pointing to the source of the nervous trouble. On the other hand, a large number of cases have been reported in which hystero-epilepsy and similar symptoms have disappeared after removal of the ovaries. In the collection of 218 cases made by Battey of the operations between 1872 and 1881 epileptic attacks were present in twenty-six cases, and were relieved in over two thirds of the number. A number of cases have been reported since this collection was made in which hystero-epilepsy has been the chief indication for removal of the ovaries, and has disappeared or been greatly mitigated by the operation.

As examples of such cases may be mentioned two of Carstens',[3] whose histories were briefly as follows: —

CASE I. The patient, twenty-four years old, single, had been a sufferer about five years from dysmenorrhœa, leucorrhœa, and severe hystero-epilepsy, coming on at the menstrual periods. There was no hereditary nervous tendency. Examination showed retroversion of uterus, slight endometritis, internal stenosis of uterus, and ovarian tenderness The left ovary (adherent) was removed, together with a small cyst from the left Fallopian tube. The operation was followed by disappearance of the menses, and by permanent relief of the hystero-epilepsy and the leucorrhœa, at least neither had recurred a year after operation.

CASE II. The patient, twenty-four years old, married, has no nervous family history. Severe ovaralgia came on four years ago, accompanied by pain in the vertex and attacks of hystero-epilepsy, occurring sometimes daily. Examination showed retroflexion of the uterus and exquisitely tender left ovary. This was removed, and found diseased. Perfect cure followed, without remission up to the time of second report, made four months after operation. The conclusions drawn by Carstens are as follows: "In general I might conclude that Battey's operation is not only justifiable, but really we might say it is criminal neglect not to perform it in cases which fail to be benefited by other treatment. It is a last resort after every other proper treatment has failed in cases which are caused by ovarian disease, such as hystero-epilepsy, dysmenorrhœa, and menorrhagia due to fibroid tumors, and which either endanger the life of the patient or make life a burden to her."

These views are certainly justified by experience, and the difference between these results and those of E. G. Landau and Remak seems to lie in the selection of cases. That operated on by the latter writers was one of the large class of hystero-epileptics in which the nervous condition is independent of the uterine appendages. The fact was established by examination of the ovaries after operation that in this case the ovarian tenderness did not result from disease of those organs, but was only indicative of general sensitiveness of the nervous system. As regards this class of cases, which is to say, probably, as regards the large majority of cases of hysteria, the conclusions of Landau and Remak are undoubtedly correct. Such cases, however, as those operated on by Carstens, come under quite another category, in that the hysterical symptoms were manifestly secondary to and dependent on ovarian irritation. It is only with regard to the latter class of cases that the question of operation should ever have been considered for a moment,[4] and the first question to be asked is, Into which class does the case in hand fall?

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, April 9, 1884.

[2] Zeitschrift f. klin. Med., Berlin, 1883, vi., 437–452.

[3] American Journal of Obstetrics, March, 1883.

[4] Cases of *insanity* accompanying menstruation have indeed been

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
May, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 11	29.776	53	64	47	62	42	77	60	W	W	NW	17	16	12	C	O	C	—	—
Mon., 12	30.007	47	62	44	60	43	49	51	NW	NW	NW	17	23	5	C	F	O	—	—
Tues., 13	29.767	47	59	42	71	84	75	77	NW	SE	SE	12	15	15	C	C	R	—	—
Wed., 14	29.824	58	55	42	100	82	98	93	E	NW	S	20	15	3	R	F	C	—	—
Thurs., 15	29.670	56	70	42	58	45	89	64	W	W	SW	12	7	8	C	O	O	—	—
Fri., 16	29.565	54	68	45	60	54	73	62	S	W	NW	9	14	7	O	F	C	—	—
Sat., 17	29.650	51	62	41	66	75	75	72	W	W	W	12	11	12	C	O	C	—	—
Mean, the Week.	29.751	52	63	43				67										15.30	0.76

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MAY 17, 1884, TO MAY 23, 1884.

WILSON, GEORGE F., first lieutenant and assistant surgeon. Ordered to proceed to Fort Canby, Washington Territory, for temporary duty at that post, relieving Assistant Surgeon W. O. Owen, Jr., U. S. A., who will report in person at these headquarters for further orders. Paragraph 5, S. O. 62, Headquarters Department of Columbia, May 12, 1884.

STERNBERG, GEORGE M., major and surgeon. Relieved from duty in Department of the East, and ordered to report to the Surgeon-General of the Army for temporary duty. Paragraph 2, S. O. 115, A. G. O., May 17, 1884.

MAGRUDER, DAVID L., lieutenant colonel and surgeon. Ordered to be relieved from duty as medical director, Department of the Missouri, and to proceed to Philadelphia, Penn., and assume duties of attending surgeon and examiner of recruits in that city.

FRYER, BLENCOWE E., major and surgeon. From Department of Missouri to Department of Dakota.

EWEN, CLARENCE, captain and assistant surgeon. From Department of Missouri to Department of Platte.

STRONG, NORTON, first lieutenant and assistant surgeon. From Department of Platte to Department of Missouri. Paragraph 7, S. O. 115, A. G. O., May 17, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 24, 1884.

MARTIN, W., assistant surgeon, ordered to U. S. S. Constellation.

NELSON, H. C., medical inspector, granted leave of absence for one year.

BALDWIN, L. B., passed assistant surgeon, detached from U. S. S. Pensacola, and waiting orders.

WELLS, H. M., surgeon, ordered to Naval Hospital, Brooklyn.

J. M. MURRAY, passed assistant surgeon, detached from U. S. S. Minnesota, and ordered to U. S. S. Passaic.

WAGGENER, J. R., passed assistant surgeon, ordered to U. S. S. Hartford.

OBITUARY.

PROF. J. B. DUMAS, member of the Académie de Médicine of France, has recently died at an advanced age. He was the author of numerous scientific works, and was an eminent authority in matters of chemistry. In the character of his life-work, the seat of his professorship, and the time of his decease he was closely associated with another distinguished chemist, CHARLES ADOLPHE WURTZ, who died in Paris May 12th. Wurtz was born in Strassburg, November 26, 1817, became chief of the chemical department in the medical faculty at Strassburg in 1839, and took his degree there in 1843. Subsequently he was connected with institutions in Paris and Versailles. After the death of Orfila in 1853, and the retirement of Dumas in 1854, their chairs were united in that of medical chemistry, and given to Wurtz. In 1856 he became a member of the Medical Academy, in 1866 Dean of the Faculty of Medicine, and in 1867 of the Academy of Sciences, at whose suggestion the biennial prize of 20,000 francs had been awarded to him in 1865. On December 3, 1875, he submitted to the French Academy the first specimen of gallium, a new metal discovered by Lecoq De Boisbaudran. He was the author of many valuable volumes on chemistry.

BOOKS AND PAMPHLETS RECEIVED. — A Text-Book of Pathological Anatomy and Pathogenesis. By Ernst Ziegler. Translated and Edited for English Students by Donald MacAlister, M. A., M. B. Part II. Special Pathological Anatomy. Sections I.–VIII. London: Macmillan & Co. 1884.

Some Recent Theories regarding the Pathogeny of Sympathetic Ophthalmia, viewed from a Macroscopic Stand-point. By Samuel Theobald, M. D. (Reprint from Arch. f. Ophthalmology.) 1884.

New York and Brooklyn Formulary of Unofficial Preparations. Published by a Joint Committee of Delegates from the College of Pharmacy of the City of New York, etc. College of Pharmacy Building, New York.

Clinical Notes on Cancer, its Ætiology and Treatment. With special reference to the Heredity Fallacy, etc. By Herbert L. Snow, M. D. (Lond.), etc. London: J. & A. Churchill. 1883.

On Malignant Disease, Sarcoma, and Carcinoma of the Larynx. By Henry T. Butlin, F. R. C. S. London: J. & A. Churchill. 1883.

Seventeenth Report of the Medical Staff of St. John's Hospital, Lowell, Mass. 1884.

The Philosophy of Manipulation in the Reduction of Hip and Shoulder Dislocations. Read before the American Surgical Association, 1884. By Moses Gunn, M. D., A. M., LL. D. (Reprint.) Chicago. 1884.

Vaccination: its Necessity, Control, Efficiency, and Safety. Prepared by Eugene Foster, M. D., Augusta, Ga., Chairman of the Committee of the American Public Health Association on Compulsory Vaccination. (Reprint.) Concord, N. H. 1884.

Twenty-Sixth Annual Report of the Washingtonian Home, located at 41 Waltham Street, Boston. 1884.

The New Science of Medicine. By Norman Bridge, M. D. Doctorate Address at Forty-First Annual Commencement, Rush Medical College, Chicago, February 19, 1884.

What and Why. Some Common Questions Answered. Boston. 1884.

Clinical Observations on the Use of Jequirity in Ophthalmia. By H. Knapp. (Reprint, Archives of Ophthalmology.) 1884.

Prospectus of a New Work on Physiology entitled Natural Philosophy of the Body, or the Mechanics in Respiration, Circulation, Absorption, etc. By William H. Triplett, M. D., New York.

Mechanical Principle in the Circulation in the Embryo: Placental Souffle the Analogue of Respiration. [Examples of foregoing Work.] (Reprint from Gaillard's Medical Journal.)

On Dupuytren's Finger-Contraction: its Nervous Origin. By Robert Abbé, M. D. (Reprint from New York Medical Journal.)

Original Articles.

HYSTERIA, AS AFFECTED BY REMOVAL OF THE OVARIES.[1]

BY G. L. WALTON, M. D.

It is not the object of this paper to discuss oöphorectomy, as such, either from the surgical or the moral point of view, but to consider the question of hysteria as benefited or not benefited by the operation. This operation having, in the face of persistent opposition, forced itself into recognition on purely gynæcological grounds, the neurological aspect of the subject seems now to attract considerable attention, and its importance is not inconsiderable.

That all sorts of reflex nervous symptoms accompany diseases of the uterine appendages is a well-recognized fact. Similar symptoms appear, to be sure, in women with normal reproductive organs, and even in men, facts which have led to the depreciation of the uterine origin of hysteria to that degree that we sometimes meet with the statement that hysteria is *always* a constitutional disease, having no relation whatever to the pelvic organs. Now, although this is undoubtedly the usual character of the disease, there are certainly many cases in which hysteria occurs in persons possessing no constitutional tendency to nervous trouble, the symptoms dating accurately from disease of the pelvic organs. In view of these cases we must take a step backwards towards the ancient view that all hysteria arose from uterine disorder, substituting, however, probably here the ovaries for the uterus as the seat of original irritation. It becomes of practical importance to consider this subject carefully, for if hysteria exists in a given case of pelvic disease in which operation is proposed, and if the hysteria is considered to be dependent on the ovarian irritation, there will be an additional indication for removing the offending organ. Indeed, if the hysterical symptoms reach a certain degree in such a case they may alone furnish sufficient cause for the operation. One finds not infrequently among reported cases of Battey's operation the statement that the reflex nervous symptoms were relieved. Detailed accounts of such symptoms are, however, not common, and it seems probable that among these cases typical and measurable symptoms of hysteria, such as hemianæsthesia, would be oftener found if oftener sought. As a rule, however, the nervous symptoms have occupied the background, the important indication for operation being generally the dysmenorrhœa.

The question of removal of the ovaries for hysteria alone has now been broached, and has already been practically tested with results diametrically opposed.

As an example of unsuccessful operation may be cited the case of Landau and Remak,[2] in which both ovaries were removed on account of hystero-epilepsy, combined with hysterical hemianæsthesia. The ovaries were found normal, and the nervous symptoms were not alleviated in the least. These writers express, therefore, the opinion that the operation for hysteria is unjustifiable, and that the tenderness existing over the ovaries in this disease is merely a hyperæsthesia symptomatic of the general nervous irritability rather than pointing to the source of the nervous trouble. On the other hand, a large number of cases have been reported in which hystero-epilepsy and similar symptoms have disappeared after removal of the ovaries. In the collection of 218 cases made by Battey of the operations between 1872 and 1881 epileptic attacks were present in twenty-six cases, and were relieved in over two thirds of the number. A number of cases have been reported since this collection was made in which hystero-epilepsy has been the chief indication for removal of the ovaries, and has disappeared or been greatly mitigated by the operation.

As examples of such cases may be mentioned two of Carstens',[3] whose histories were briefly as follows: —

Case I. The patient, twenty-four years old, had been a sufferer about five years from dysmenorrhœa, leucorrhœa, and severe hystero-epilepsy, coming on at the menstrual periods. There was no hereditary nervous tendency. Examination showed retroversion, displacement of uterus, slight endometritis, internal stenosis, motor uterus, and ovarian tenderness. The left ovary (adherent) was removed, together with a small cyst from the left Fallopian tube. The operation was followed by the disappearance of the menses, and by permanent relief from the hystero-epilepsy and the leucorrhœa, at least neither had recurred a year after operation.

Case II. The patient, twenty-four years old, married, has no nervous family history. Severe ovaralgia came on four years ago, accompanied by pain in the vertex and attacks of hystero-epilepsy, occurring sometimes daily. Examination showed retroflexion of the uterus and exquisitely tender left ovary. This was removed, and found diseased. Perfect cure followed, without remission up to the time of second report, made four months after operation. The conclusions drawn by Carstens are as follows: "In general I might conclude that Battey's operation is not only justifiable, but really we might say it is criminal neglect not to perform it in cases which fail to be benefited by other treatment. It is a last resort after every other proper treatment has failed in cases which are caused by ovarian disease, such as hystero-epilepsy, dysmenorrhœa, and menorrhagia due to fibroid tumors, and which either endanger the life of the patient or make life a burden to her."

These views are certainly justified by experience, and the difference between these results and those of E. G. Landau and Remak seems to lie in the selection of cases. That operated on by the latter writers was one of the large class of hystero-epileptics in which the nervous condition is independent of the uterine appendages. The fact was established by examination of the ovaries after operation that in this case the ovarian tenderness did not result from disease of those organs, but was only indicative of general sensitiveness of the nervous system. As regards this class of cases, which is to say, probably, as regards the large majority of cases of hysteria, the conclusions of Landau and Remak are undoubtedly correct. Such cases, however, as those operated on by Carstens, come under quite another category, in that the hysterical symptoms were manifestly secondary to and dependent on ovarian irritation. It is only with regard to the latter class of cases that the question of operation should ever have been considered for a moment,[4] and the first question to be asked is, Into which class does the case in hand fall?

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, April 9, 1884.

[2] Zeitschrift f. klin. Med., Berlin, 1883, vi., 437–452.

[3] American Journal of Obstetrics, March, 1883.

[4] Cases of *insanity* accompanying menstruation have indeed been

My second examination was made March 21st, two months after operation. The hemianæsthesia was much lessened, the lightest touch being felt over the entire right side, though not quite so plainly as on the left. The substances which were not perceived at all by smell and taste on the right side before operation were now recognized on that side, though not so easily as on the left. The watch on the temple, previously heard only on the left, was now heard on both sides, best on the left. There was no trace of the wax-like rigidity in the left foot, and that in the right was much diminished, the right foot when bent into an awkward position now falling back directly to a natural one, though not so completely as the left. The reflex spasm of the quadriceps femoris on the right still persisted. The tendon reflex was normal on the left, but still exaggerated on the right, causing a twitch of the whole body, but less marked than before, while the distress caused by the tap was comparatively slight.

The most marked improvement was with regard to the convulsions, previously so severe and frequent, only two light attacks having appeared since the operation. There had been considerable pain in the back and abdomen at the menstrual period, and at this time the patient, at others up and about, was confined to her bed for some days. We cannot, of course, assume that the improvement will be permanent, but the case well illustrates the rôle which hysteria may play as an indication for operation, and the result up to this time has certainly been most satisfactory.

A CASE OF ACTINOMYCOSIS IN A HEIFER.[1]

BY W. F. WHITNEY, M. D.

SINCE attention has been called to this form of parasitic disease a number of cases have been observed in Europe within the last two years. Few, however, have been seen in this country, and, as far as is known, none in this immediate vicinity.

The specimen came from the head of a heifer which had been sent to the Harvard Veterinary School, and was kindly placed at my disposal for examination by Dr. C. P. Lyman, who suspected the nature of the affection.

The disease presented itself as a large fungous-shaped mass, projecting from the lower edge of the right horizontal ramus of the lower jaw near the middle. The surface was granulating and covered with a thick crust of purulent material. The outline was slightly lobulated. Upon section the mass appeared to be composed of lobe-shaped divisions, distinguished by their yellowish color and softer consistency from the intervening tissue. Upon deeper dissection the bone was found invaded throughout its thickness, and a large cavity crossed by bony trabeculæ filled with a pultaceous mass of a dirty yellow color was disclosed. The yellow color, both in the solid portions of the growth and in the semi-fluid substance from the cavity, was found to be confined to numerous irregular-shaped particles about the size of a pin's head. These could be easily isolated on the point of a knife.

Microscopic examination of these particles when fresh showed that they were composed of large numbers of small bodies of an elongated pear shape, sometimes branching, with slightly clubbed extremities. These were arranged side by side radiating from a central point or line, and presented a very characteristic and peculiar appearance. Lime salts were often associated with them, which had first to be dissolved in dilute mineral acid before the nature of the growth could be determined.

Portions of the tumor were hardened in a mixture of two parts Muller's fluid and one part alcohol, and thin sections made from this showed that each of these clumps of radiating bodies was surrounded by a narrow zone of small cells, the size of leucocytes, in a greater or less degree of fatty degeneration. (This must contribute largely to the yellow color of the particles as seen with the unaided eye.) This zone gradually passed into a tissue composed of large contiguous round cells, and which would be designated as sarcomatous.

These appearances correspond to those first described by Israel in cattle, and later by Ponfick in man, and distinguish the disease as produced by the presence of actinomyces or radiating fungi.

The clinical history of the case, as furnished by the owner, is as follows: —

"The heifer was a pure Holstein, born in Massachusetts November 25, 1881. In the spring of 1883 was hooked in the jaw, which swelled badly at first but receded later. In October, 1883, the swelling broke and discharged up to the time of death; at the same time the tumor began to increase rapidly in size. She aborted January 6, 1884, at about the eighth month, and was killed April 8, 1884. The owner had never seen a similar case, nor was there any other among his herd."

The occurrence of this case renders it probable that others, as yet undetected, may be in the neighborhood and may serve as a focus of contagion to other animals and man.

[1] Specimen shown at the meeting of the Clinical Section of the Suffolk District Medical Society, April 9, 1884.

Reports of Societies.

THE ANNUAL MEETING OF THE PENNSYLVANIA STATE MEDICAL SOCIETY, MAY 14, 15, AND 16, 1884.

THE thirty-fifth annual session of the State Medical Society of Pennsylvania was held at Philadelphia from May 14th to 16th inclusive. It was the largest meeting ever held by this Association; nearly four hundred names were registered. DR. HENRY H. SMITH, of Philadelphia, President of the Society, performed the duties of presiding officer with dignity and discretion.

FIRST DAY'S PROCEEDINGS.

DR. JOHN B. ROBERTS, chairman of the Committee of Arrangements, delivered a brief Address of Welcome.

TRIBUTE TO PROFESSOR GROSS BY GOVERNOR PATTISON.

Dr. Roberts was followed by the Governor of Pennsylvania, HON. ROBERT E. PATTISON, in a short address, in which a graceful tribute was paid to the memory of Professor Gross, "that great man whom all regarded with so much pride and veneration; to whose masterly mind two continents paid honor, and

who held the triple tributes of Oxford, Cambridge, and Edinburgh; by whose death the medical profession has sustained a great loss."

PUBLICATION OF PAPERS.

The Committee on Publication submitted a resolution declaring that in future no paper read before this Society shall be printed in the Transactions if it has previously been published in full. An amendment was offered also forbidding the publication of abstracts of papers. In the discussion of this resolution it was declared that some of the members had given their papers or long abstracts of them to reporters of the daily press in order to advertise themselves. The matter was referred finally to a committee of five members to report at the session on Friday.

A WOMAN'S VOICE.

The delegates to the various State Medical Societies made reports, among them being one from the members who visited the Massachusetts State Medical Society, presented by Dr. Alice Bennett, of Norristown. This was said to be the first occasion upon which a woman's voice was heard in the proceedings of this Association. Subsequently the same voice was heard reading the Address upon Mental Disorders in fulfillment of an appointment made at the last meeting. The address was a good one, and was received with applause.

VIVISECTION.

A communication received at the last meeting from the Antivivisection Association, asking that the requirements of experimental medicine and physiology be defined by law in order to avoid unnecessary cruelty was reported upon by a committee to which it had been referred, of which DR. S. WEIR MITCHELL was chairman. In the report all attempts to control vivisection by law were deprecated inasmuch as vivisection had been almost completely stopped in England by the law requiring licenses to be taken prior to performing experiments upon animals. Dr. Mitchell stated that he had applied for snake venom to the government officers in India in order to pursue some investigations upon its nature and effects, and that assistance had been granted to him to conduct experiments in America which could not be conducted in England on account of the law. The passage of the following was recommended: —

Resolved, That in view of the attempts which have been or are to be made to obstruct by restrictive legislation the progress of experimental medicine, this Society desires to express its earnest conviction that experimentation on animals is a most useful source of knowledge in medical sciences; that it is the means by which many important discoveries, both practical and scientific, have been accomplished; that its direction and supervision can be properly intrusted only to members of the medical profession, and that its restriction or prohibition by law would inevitably retard the acquisition of knowledge in respect to healthy and morbid actions, the cause and prevention of disease, and the improvement of the medical art.

On motion the report was accepted, the resolution adopted, and the committee continued.

A STATE BOARD OF HEALTH.

A resolution offered by DR. E. A. WOOD, of Pittsburg, was adopted, calling for the appointment of a committee of seven to prepare and report at the session a plan for organizing a society for securing a State Board of Health.

THE PRACTICE OF PHARMACY.

On motion of DR. J. V. SHOEMAKER the Society indorsed the passage of an act now before the Legislature regulating the practice of pharmacy, and adopting measures to prevent adulteration in drugs and medical preparations as proposed by the Pennsylvania Pharmaceutical Association.

HYGIENE AND STATE MEDICINE.

The address on Hygiene and State Medicine was delivered by DR. BENJAMIN LEE, in which the lecturer dwelt upon the necessity of education of the community in sanitary matters, and the importance of self-help in organizing sanitary organizations in preference to depending upon State boards. Voluntary sanitary associations, such as those first started in Edinburgh, and in Newport, of which there are now one hundred and seventy in active operation throughout this country, were spoken of approvingly for small places, while for large cities stock companies are more suitable. These companies engage to make inspections, both special and periodical, of dwellings and buildings confided to their care, as far as their sanitary condition is concerned; to indicate defects if any exist, and to remedy those defects by introducing sanitary appliances of the best material, most approved pattern, and most scientific construction, under the supervision of thoroughly qualified experts; to furnish plans and specifications for the sanitary system of new buildings and of grounds, and to take complete charge from the outset of the introduction of such systems.

PROPER MEDICAL EDUCATION

was discussed in a paper by HENRY LEFFMAN, M. D. He claimed that the dominant methods of instruction in medical schools are not the results of intelligent effort to meet the needs of the community, but are largely an irregular development. The reforms which medical colleges have adopted have been mostly unwilling concessions to public sentiment. The sevenfold division of branches has nothing to recommend it but antiquity; it is not a convenient nor a scientific division of the subject. Under this arrangement some of the departments of the college course are overcrowded, others have not sufficient matter to occupy the time assigned. Departments like hygiene, mental and nervous diseases, and medical jurisprudence have developed so of late years that they might properly be taught by separate chairs and not made merely subsidiary to other chairs, or limited to spring or fall lectureships. The extension and success of post-graduate schools indicate the direction in which the improvement of the curriculum should be made.

Higher specialization is the necessity of the time. The success which has been attained by dentistry shows that other departments, such as otology, laryngology, etc., might with advantage be pursued independently. There would be no reasonable objection to establishing the degrees of doctor of otology, ophthalmology, and so on, commensurate with the degree of doctor of dental surgery.

A preliminary training for the student before enter-

ing on the study of medicine is so obviously necessary that it need not be argued.

The final work of medical reform will be accomplished when the college is made merely the instructor, license to practice being given by an official board of examiners after a written public examination.

SCHOOL HYGIENE.

DR. T. H. FENTON directed attention to Hygiene in Public Schools, or rather the neglect of it, and pointed out some of the principal defects of construction and administration in our public school buildings.

HEART DISEASE AND INSANITY.

The Address in Mental Disorders was read by DR. ALICE BENNETT, of Montgomery County. Her subject was the Relation of Heart Disease to Insanity, in which she dwelt upon the common occurrence of heart disease in certain forms of chronic mania with delusions and hallucinations, especially of hearing. After giving the histories of sixteen cases, she analyzed the clinical notes of five hundred cases with special regard to the occurrence of cardiac affections.

DR. R. H. CHASE read a paper on the

PROTECTIVE RIGHTS OF THE INSANE IN PENNSYLVANIA.

The Pennsylvania Hospital for the Insane was established in 1751; it was the first of the kind in America. The Friend's Asylum for the Insane at Frankford was started in 1817, and, like the former, is still in active operation. State hospitals for the insane poor were established at Harrisburg in 1845, at Dixmont, 1853, Danville, 1871, Norristown, 1880, Warren, 1880. The establishment of the Commissioners in Lunacy last year in this State was an additional protection to the insane; and he believed that Pennsylvania was now fully abreast with the world in this respect. The removal of all insane persons from almshouses and prisons is now decreed by law; before long it is hoped that separate provision shall be made for the chronic and criminal insane.

METHODS OF INSTRUCTION AT MEDICAL SCHOOLS.

A resolution was offered by DR. JOHN B. ROBERTS expressing dissatisfaction with the methods of instruction pursued at the medical colleges in this State, and forming a committee of seven to consider the propriety of establishing a new school directly under the auspices of the State Society, in which the requirements of the Society with regard to preliminary education, length of course (three years graded course), and final examination by an independent board of examiners, would be complied with, *provided* that if the colleges in Philadelphia adopt these changes no further steps shall be taken in the matter. The subject was laid upon the table.

SECOND DAY'S PROCEEDINGS.

The Treasurer reported a balance of $2451.85 on hand. The report was accepted, after auditing.

THE ADDRESS IN MEDICINE

was delivered by DR. W. H. DALY, of Pittsburg. The speaker referred to the beneficial effect of the germ theory of disease in leading operators to practice scrupulous cleanliness in surgery, but stated that the original observations upon which these theories are based could not be conducted in this country for want of government aid, but clinical study, by which these views are to be tested, is carried on by every physician. The discovery of Jenner was quoted as an illustration of what a country physician could do. The labors of Pasteur and their great value were mentioned, but he did not consider them worthy to be compared with Jenner's services to humanity. With regard to specialties in medicine he deplored the shallowness of some specialists, and repeated Dr. Hodgins' statement that "a specialist, in the best sense, should be a physician and something more; but in the worst sense a specialist is something worse than a physician and something less." Many additions to the science of medicine by the labors of specialists were briefly mentioned, and he concluded by stating that this, after all, is only the natural process of growth. Science has always been advanced by labors in special lines of research.

DR. C. W. DULLES read a paper on

DISORDERS MISTAKEN FOR HYDROPHOBIA,

in which he dwelt upon the rarity of true rabies and the probability of other disorders being mistaken for it. Among those which had been mistaken for hydrophobia he enumerated diseases of the alimentary canal, of the respiratory apparatus, of the circulatory apparatus, various systemic disorders, and nervous diseases. The similarity in the symptoms with those of acute mania, tetanus, and epilepsy was especially pointed out; many cases of reported hydrophobia are simply hysterical.

EXTERNAL TREATMENT IN SKIN DISEASES.

DR. ARTHUR VAN HARLINGEN read a paper on The Principles of External Treatment in Diseases of the Skin, in which he essayed to classify various topical remedies according to their effects upon the diseased skin, as protectives, sedatives, astringents, anæsthetics, stimulants, caustics, and mechanical agents. The object of this classification was to suggest lines of treatment which might aid the general practitioner, who might be discouraged with the nomenclature, but still would wish to treat the patients suffering with skin eruptions.

A NEW SPHYGMOGRAPH.

DR J. H. MUSSER exhibited a modification of Pond's sphygmograph, suggested by Dr. Matur, of Worcester, Ohio, in which the base of the instrument is narrowed so as only to cover the radial artery, instead of being broad and elliptical. The advantages of this modification in affording a more correct indication of the pulse were insisted upon, and admirable tracings were exhibited made by the new instrument.

JEQUIRITY IN SKIN DISEASES.

DR. JOHN V. SHOEMAKER read a communication upon Jequirity and its Use in Diseases of the Skin, in which, after referring to its method of use and action in eye-practice, he spoke of its employment in skin diseases, and exhibited patients who had been affected by lupus, but who had been cured by the infusion of jequirity. It had also been useful in sloughing ulcers and epithelioma, but a much stronger infusion is required than is usually used for ophthalmological practice.

Papers were also read by Drs. J. B. Potsdamer, on Bronchitis and Pneumonia of Rheumatic Origin; Traill Green, A Plea for Chemistry; and Benjamin Lee, on Massage the Latest Handmaid of Medicine.

ELECTION OF OFFICERS.

In the afternoon the Nominating Committee reported the following, who were thereupon elected officers for 1884–85 : —

President, E. P. Allen, of Bradford.

Vice-Presidents, Jacob Price, of West Chester; D. M. Bland, of Columbia; S. Brandeis, of Erie; and S. R. Rutledge, of Indiana.

Permanent Secretary, William B. Atkinson, of Philadelphia.

Recording Secretary, A. J. Connell, of Lackawana.

Corresponding Secretary, John G. Lee, of Philadelphia.

Treasurer, Benjamin Lee, of Philadelphia.

Committee on Publication, John B. Roberts, Henry Leffman, and E. Jackson.

Judicial Council, Traill Green, of Northampton; J. A. Ehler, of Lancaster; H. B. Bishop, of Titusville.

The next meeting will be held on the second Wednesday of May, 1885, at Scranton, Lackawana County.

Chairman of Committee on Arrangements, J. F. Everhart.

On motion Dr. Roberts was allowed to withdraw from the Committee on Publication, and the name of Dr. R. J. Dunglison was substituted.

THE ADDRESS ON OBSTETRICS

was delivered by DR. JACOB PRICE, of West Chester. After a brief review of recent evidences of material progress in obstetrics, he took up several topics of present interest. Pernicious vomiting was ascribed to a local congestion or inflammation of the cervix uteri; in its treatment he recommended salines and topical applications, especially of iodine and carbolic acid. In abortion and flooding the use of the tampon was advocated, with rest and opium. Flexions were considered among the principal causes of miscarriage. In delay during the first stage of labor he preferred morphia and chloral to forced dilatation of the os. Placenta prævia, puerperal convulsions, and puerperal fever were also discussed. With reference to convulsions he said that, over-stimulation being the cause in most cases, chloral, bromide, and chloroform may be used, and in severe cases venesection answers the best of all. In puerperal fever antiseptic vaginal irrigation was considered an important feature in the treatment.

DIPHTHERIA.

L. B. KLINE, of Columbia, read a paper on Diphtheria, based upon his experience in an epidemic. He defined it to be an acute, specific, contagious, and infectious disease of a miasmatic character, probably primarily a local affection. Lactic acid was recommended as a local application to dissolve the membrane, with inhalations of steam and carbolic acid. Internally the iron and quinine treatment was considered indispensable; potassium chlorate and permanganate, sodium sulphocarbolate, bromine, sodium salicylate, eucalyptus, and other agents have also been employed with advantage.

By invitation of the Society, Dr. H. C. WOOD gave the result of his experiments made in conjunction with Dr. Formad to determine the pathological character of diphtheria. He declared that there is a mild and a virulent form of diphtheria, and that the micrococci found in the typical cases of diphtheria do not differ from those found in a healthy mouth; the micrococci must derive their toxic effect from accidental and external circumstances. The disease, as the rule, begins by local infection of the mucous membrane, which becomes crowded with micrococci; these rapidly multiply between the cells of the mucous membrane, necrosis follows, and ulceration is produced. Subsequently, the lymphatics are invaded, and next the blood, even the white blood cells. It was found that diphtheria is not a specific affection, because inoculation with various septic agents led to the production of the false membrane, and the same micrococcus was found in cases of scarlatina, when the invasion of the white corpuscles by the parasite was found to be a valuable prognostic sign. What is commonly called "diphtheria" is, therefore, only a putrid sore throat.

The Work of Woman Physicians in Asia was the subject of a communication DR. MARY H. STINSON, which contained a strong plea for the education of women in medical science for foreign missionary work.

DR. MCFERRAN'S OBSTETRIC FORCEPS.

DR. J. A. MCFERRAN exhibited his obstetric forceps, which are jointed at the junction of the blades and shanks, in order to permit flexion or extension of the head, and avoid some of the dangers of the ordinary forceps. He also made some remarks upon the mechanism of parturition, in order to explain the peculiar advantages of this form of forceps. These instruments were designed in 1877, and presented before the Philadelphia County Medical Society the same year.

DR. BENJAMIN LEE made some remarks upon

THE TREATMENT OF HIP-JOINT DISEASE,

and showed two forms of splints that he was in the habit of using. He also exhibited a case which had come under his care when in the third stage, sinuses having formed around the joint; the case was now presented with the two limbs corresponding in length, and with perfect mobility of the hip-joint. At his suggestion a committee of three was appointed to examine the patient and report.

MEDICAL DIPLOMAS.

On motion of DR. JACKSON a resolution was adopted as follows : —

Resolved, That a committee of seven be appointed by the chair to inquire as to the best method of making the diploma, which permits a man to enter upon the practice of medicine in the State of Pennsylvania, a real guarantee of his proper qualification for the work, the committee to report at the next annual session of this Society.

By another resolution this report was made the order of business for the morning of the second day of the next session.

PRESIDENT'S ADDRESS.

In the evening the Annual Address[1] of the President, DR. HENRY H. SMITH, was delivered at Association Hall, his theme being the Usefulness of Scientific Medical Organizations to our Profession and the Public. In connection with State Medicine the capital punishment of criminals by the usual method was condemned as not being in accord with the scientific progress of the age, and the suggestion was made that the Legislature be memorialized to adopt electricity as the agent to destroy life.

(To be concluded.)

[1] See pages 481 and 507 of the JOURNAL.

THE AMERICAN CLIMATOLOGICAL ASSOCIATION.

THE first annual meeting of the American Climatological Association was held in Washington, D. C., May 3d and 5th.

In the absence of Professor Loomis, the President, DR. F. I. KNIGHT, of Boston, first Vice-President, occupied the chair.

ADOPTION OF CONSTITUTION, AND READING OF PAPERS.

The first day was occupied in adopting a suitable Constitution and By-laws.

The second day was devoted to the reading of papers, as follows: —

Address by the presiding officer, DR. KNIGHT.

The Ætiology of Pulmonary Phthisis, by DR. B. F. WESTBROOK, of Brooklyn. The Effects of Sea Air upon Diseases of the Respiratory Organs, by DR. BOARDMAN REED, of Atlantic City. The Relation of Laryngeal Disease to Pulmonary Diseases, by DR. F. H. BOSWORTH, of New York. On Dryness, by DR. CHARLES DENNISON, of Denver, Col., in which he dwelt on the following points: Variability *versus* Equability; a rule for classifying climates as to dryness and desirability, based upon low, absolute, and relative humidities and preponderance of sunshine; the influence of elevation, sunshine, cold, etc., in producing desirable dryness; the physical effect of dryness on man. City Life and City Air Injurious to Consumptives, by DR. DONALDSON, of Baltimore. The Use of Compressed and Rarefied Air as a Substitute for Change of Climate in the Treatment of Pulmonary Diseases, by DR. J. SOLIS COHEN, of Philadelphia.

ELECTION OF OFFICERS.

The following officers were elected for the ensuing year: —

President, Prof. A. L. Loomis, New York; First Vice-President, Dr. F. I. Knight, Boston; Second Vice-President, Dr. W. H. Geddings, Aiken, S. C.; Secretary and Treasurer, Dr. J. B. Walker, Philadelphia; Council, Dr. J. H. Tyndale, New York; Dr. E. T. Bruen, Philadelphia; Dr. E. D. Hudson, New York; Dr. Frank Donaldson, Baltimore; Dr. Beverly Robinson, New York.

NEW YORK ACADEMY OF MEDICINE.

AT a stated meeting of the Academy held May 15, 1884, DR. D. BRYSON DELAVAN read a paper entitled

PRACTICAL SUGGESTIONS UPON THE ALIMENTATION OF PATIENTS SUFFERING FROM DYSPHAGIA.

In opening he alluded to the extreme suffering experienced in dysphagia, which came like an overwhelming blow upon patients already prostrated with disease of a serious, if not absolutely fatal, character. The conditions giving rise to dysphagia were of an organic or functional nature or, again, might be caused by surgical operations, and the trouble might be either acute or chronic. Among the organic affections were mentioned tuberculosis, cancer, syphilis, diphtheria, tonsillitis, and retro-pharyngeal abscess, and among the functional, spasm of the constrictors of the pharynx. In dysphagia there might be mechanical interference with deglutition besides pain, direct or reflex, and the result was always, of course, impairment of nutrition. When it occurred the first indication was to give the parts concerned in swallowing rest as far as possible, and sometimes the feeding of the patient with raw eggs or the use of local anodynes was all that was required. In some acute affections of the throat the act of deglutition caused intolerable suffering in spite of such measures as these, and it was, therefore, essential to abolish the act of deglutition. In cases where there was gastric impairment from any cause rectal alimentation was invaluable, but if, on the other hand, the stomach was in good condition it was highly desirable that food should be introduced directly into it if possible. If the cause of the dysphagia was not removable the method to which he now desired to call attention, Dr. Delavan said, would be found very efficient for this purpose. The basis of it was founded on the stomach tube, and he then proceeded to give a summary of the history of that device, and the applications which had of late years been made of it. Unlike the old tube hitherto employed the one which he recommended was of much smaller size. The principles of the method to which he wished to direct attention were (1) to use a tube of the smallest possible calibre that would serve the purpose, and (2) not to pass it all the way to the stomach, but only past the point of constriction of the œsophagus, if any such were present. In many cases it was simply necessary to carry it past the pharyngeal constrictors. By the use of this method pain was done away with, rest was insured, injury to the parts was avoided, and nutrition was maintained.

The apparatus was of a very similar nature, and consisted, first, of a receiver, for which an ordinary soda bottle answered better than anything else on account of the conical shape of its bottom, which rendered it easy to withdraw all the fluid at the same time that it diminished the risk of pumping air into the stomach. From the cork, through which a rubber tube passed to the bottom of the receiver, there issued two tubes, one connected with an ordinary Davidson air-compressor, and the other attached to a catheter (inside of which there was usually a small glass tube), which was to be carried into the œsophagus. The essential feature was the catheter, which might range in size from No. 9 to No. 18, English scale, the one exhibited being a No. 9. It was thus very much smaller than the smallest of the three sizes of stomach tube ordinarily in use. It was advisable that an orifice should be made in the point of the catheter so as to allow of the free passage of fluid. The prepared food was to be allowed to run very slowly into the œsophagus, and Dr. Delavan said that he found it convenient to use an ordinary "cut-off" until all the arrangements for the feeding were completed. At first but half an ounce of fluid should be given continuously.

Fourcher had used an even simpler apparatus, a glass funnel connected with the tube, and Dr. Frank Donaldson, of Baltimore, had employed a fountain syringe. Even an ordinary Davidson syringe had been used for the same purpose. Dr. Delavan said he would not stop to speak of the various preparations of food which might be employed in this way, of which the number was unlimited, and for a notice of which he would refer his readers to the articles of Dujardin-Beaumetz and the recent papers of Dr. H. C. Millard in the *New York Medical Journal*.

In describing the method of introducing the catheter

into the œsophagus, he said that the larynx could be avoided by using the finger as a guide. For the purpose of lubricating the instrument (which was never to be neglected) white of egg, mucilage, or milk were excellent, but glycerine and oil were to be avoided on account of their disagreeableness to the patient. A patient of intelligence could soon learn to introduce the tube with more comfort to himself than could be done by the physician. Its passage, however, was not always an easy or painless operation. When the introduction gave rise to dyspnœa Dujardin-Beaumetz directed that the patient should take full breaths, and when it excited nausea that bromide of potassium should be given for a day or two beforehand.

The latter part of the paper was devoted to a consideration of the special applications of the method. He first spoke of its employment in tuberculosis, and said that in no complaint was it more useful. If there was a tubercular deposit in the region of the epiglottis or about the tonsils deglutition caused more suffering than in any other throat trouble. With the chance thus afforded of maintaining a full diet the condition of affairs became greatly changed, and in some cases the possibility of recovery or at least a considerable prolongation of life was afforded. Dr. Delavan then went on to speak of its application in cancer, syphilis, diphtheria, acute tonsillitis, parotiditis, and retro-pharyngeal abscess. In referring to its use in functional disorders he said that dysphagia from spasm of the pharyngeal constrictors was a comparatively rare occurrence, but when it did occur a few well assimilated meals would probably contribute more than anything else to break up the attack. In faucial paralysis from cerebral hæmorrhage, embolism, or diphtheria it was often of service, on account of the well-known tendency of the food to get into the larynx, and hence, in his treatise on diphtheria, Dr. Jacobi had recommended artificial feeding in certain cases of diphtheritic paralysis. When the tube was to be employed after a surgical operation it was advisable to accustom the patient to its use before the performance of the operation. This method being, therefore, of great service in such a variety of conditions, he urged that it should be given a fair, patient, and intelligent trial in all appropriate cases.

The discussion of the paper was participated in by Drs. John C. Peters, E. C. Harwood, Brandeis, George L. Peabody, and W. C. Jarvis, and brought to a close by Dr. Delavan, after which Dr. R. W. Taylor read a paper on

CHANCRE OF THE TONSILS.

Having mentioned that he referred to true chancre as opposed to chancroid, he remarked that this initial lesion of syphilis was not so rare as had been generally supposed. *Origin.* It came either from kissing, from the placing of pencils, bottles, cigars, or other articles in the mouth, or from depraved and unnatural sexual contact, which, he regretted to say, he feared was becoming alarmingly frequent in the community. He then proceeded to mention four cases which he had personally seen. The first was in a boy, nine years of age, under the care of Dr. McBurney at Bellevue Hospital for fracture of the leg, and was contracted from bestial practices. The second occurred in a young woman of loose habits, and was ascertained to have been contracted in the same way. The other two occurred in men, and one of these also was certainly due to the same cause. He then mentioned two others which he had not seen himself, but which had been reported to him by gentlemen of the highest authority. One was told to him in minute detail by the late Prof. Freeman J. Bumstead, and the account of the other was given him by Dr. Edward Wigglesworth, of Boston. It was that of a medical student who contracted chancre of the tonsil by placing his mouth in contact with that of a newly-born asphyxiated infant.

Having referred to seven cases which had been reported by European writers (four of which occurred under the observation of Fournier), he went on to speak in detail of the history and symptoms of chancre of the tonsils. At first there were redness and swelling, but no perceptible glandular complication. As time went on, induration and ulceration of the tonsil were noticed, with a grayish-white coating irregularly spread on it; while the neighboring lymphatic glands began to be enlarged and matted together. He then spoke of the differential diagnosis between mucous patches, syphilitic sclerosis, and epithelial cancer, on the one hand, and chancre of the tonsil on the other; summing up the points of diagnosis of the latter as follows: —

(1.) The details of the manner of infection.

(2.) The slow development of the lesion, running a subacute course.

(3.) Its unilateral position.

(4.) Difficulty of deglutition, and even pain, which is referred to one side.

(5.) The special implication of the pre-auricular gland.

(6.) The comparatively little induration and enlargement of the glands at a distance.

In the discussion which followed the reading of the paper, Dr. F. N. Otis stated that while he had never seen a case of chancre of the tonsil, so far as he remembered, he saw no good reason to doubt why the lesion should not occur as well there as in many other parts of the body. All that was requisite for syphilitic infection was a *contagium* and an open surface for it to lodge upon. He thought, however, that all the diagnostic points referred to by Dr. Taylor would not be found in certain instances, and, therefore, that it was not safe to decide in these cases that because they were not all present the patient did not have an initial lesion of syphilis. Such initial lesions were by no means always characterized by ulceration, for instance, and he had frequently seen a simple little hard nodule on the genitals, after being the means of infecting the system with constitutional syphilis, become absorbed without having undergone any process involving destruction of tissue whatever. In order to show what peculiar forms the initial lesion sometimes assumed, he related a case in which it was distinctly demonstrated that a little red point on the conjunctiva was the source of the whole trouble.

Dr. F. R. Sturgis had also seen four cases of chancre of the tonsil. One was that of the boy in Bellevue Hospital, the history of which had been given in the paper, and of the others one occurred in a man and two in women. In three there was a considerable amount of active inflammation, while in the fourth the symptoms were less acute. The correct diagnosis of the condition, he considered, depended in great part on the enlargement and induration of the pre-auricular and post-auricular glands, and especially of the former. There could be little doubt of the nature of the case when this was distinctly marked.

Dr. L. D. Bulkley remarked that he thought this

was one of the most useful papers that had been read before the Academy for some time. Twenty years ago, he said, no one would ever have thought of looking for the initial lesion of syphilis in the tonsils, and one of the most important points about Dr. Taylor's paper was, that it directed attention to another place in which such a lesion was liable to occur. Not long since syphilis had been regarded as entirely a venereal disease; but since it had been shown in how many ways the infection could be introduced into the system it was no longer considered as necessarily a reproach to be affected with it. He had himself seen four cases of chancre of the tonsil, and one of these he related in detail. It was that of a single lady, thirty-two years of age, of irreproachable character, who contracted it from kissing a man to whom she was engaged to be married, who was suffering from syphilis at the time. It proved to be one of the most severe and terrible cases of constitutional syphilis that Dr. Bulkley had ever met with; and in consequence of the character of the lady the true nature of the trouble was not recognized by the family physician until it had been pointed out by the speaker. Such a paper as this, he thought, therefore, was of the greatest practical importance, as indicating to the general practitioner a possible source of danger from syphilis in a situation where he would probably not otherwise have thought of looking for it.

DR. W. C. JARVIS thought that there was more dread than there need be of chancre occurring in this position, because there was a constant stream of mucus and saliva bathing the throat and pouring down into the stomach; thus preventing syphilitic virus, when introduced into the mouth, from obtaining a foothold. Chancre of the tonsil was a very rare condition, and this, he believed, was the reason why it was so.

DR. TAYLOR said he was quite well aware that there was, as Dr. Otis had pointed out, much variation in the appearances of the initial lesion of syphilis in many parts of the body. But in the tonsil he contended that the appearances did not vary to nearly as great an extent as in some other locations, and that hence the most of the diagnostic points which he had indicated might reasonably be looked for in chancre in that position. But even if the true nature of the affection were not immediately recognized, the patient would not suffer thereby, for as soon as the constitutional symptoms made their appearance there could no longer be any doubt about it; and when this occurred was the correct time to commence with anti-syphilitic treatment. He agreed with Dr. Sturgis that the cardinal point in the differential diagnosis of chancre of the tonsil was in the condition of the glands characteristic of this affection. As to Dr. Jarvis's statement that there was needless dread of it, he was quite willing to admit that chancre of the tonsil was a comparatively rare condition; but, at the same time, as it was one which was liable to be occasionally met with, it would not do to disregard it altogether. As undoubted cases had actually occurred in the past, it was certain that from time to time they would again make their appearance.

— The German government has appropriated 135,000 marks for compensation to the Cholera Commission. Dr. Koch gets 100,000 marks, and the rest is distributed among his colleagues.

NEW YORK COUNTY MEDICAL ASSOCIATION.

ALBUMINURIA.

AT a meeting of the Association held Monday evening, May 19th, DR. GASPAR GRISWOLD read a paper entitled Notes on Albuminuria. Since testing the urine for albumen had become such a common practice among medical men, and especially by those holding the position of examiners in life insurance companies, he said, the presence of albuminuria was no longer regarded as any positive proof of disease of the kidneys, or at all events of disease of a serious character. During the last few years albumen had frequently been noticed in the urine of individuals in apparently perfect health, either as a condition lasting for several years, a transient condition, or an intermittent condition, appearing at certain hours of the day and being absent at other times.

Having expressed the opinion that this condition of albuminuria in those in good health was probably due in reality to some more or less temporary inadequacy of the renal epithelium, which when its integrity was complete permitted only the constituents of normal urine to escape, he alluded to a number of conditions which were liable to be associated with a greater or lesser degree of albuminuria. Among these were hysteria, anæmia (especially at the time of puberty), and the presence in excess in the system of certain substances such as the biliary principles and iodide of potassium. It would seem, therefore, that there was a temporary degeneration of the renal epithelium, which attended the excretion of a large amount of solid constituents by the kidneys.

He then gave an abstract of the literature relating to this subject, and dwelt particularly on the statements of Sir William Gull, Moxon, and George Johnson; concluding with a reference to a paper published by Dr. Munn in the *New York Medical Record* of March 22, 1879, in which he reported twenty-four cases of albuminuria (in two instances accompanied by casts) occurring in persons applying for life insurance in the company for which he was examiner who were apparently in perfect health, but all of whom were rejected on this account. As to the effect of exercise in producing albuminuria, Dr. Griswold stated that he had himself made repeated examinations of the urine of twenty-four individuals after taking violent exercise which was, as a rule, followed by cold shower baths, and in not a single instance was he able to detect the smallest trace of albumen. In this connection he related the case of a gentleman who applied for a policy in the New York Life Insurance Company, but was rejected because his urine, which was examined in the afternoon, just after he had been taking a boxing lesson, was found to contain albumen. The following month he was persuaded to apply for insurance in another company, and on this occasion he was accepted, as no albumen was found in his urine and he was otherwise in excellent condition. Having mentioned that albumen had been found in his urine a month previous, however, several very careful examinations were made, and one of them revealed the fact that the urine was not only highly albuminous but also contained both fatty and granular casts. This examination, like that in the other company, was made in the afternoon, just after the applicant had taken a boxing lesson, and in consequence of the condition of the urine he was again rejected. He then consulted Dr. Janeway in reference to his urine;

but the latter examined twelve specimens of it in succession without finding anything abnormal about it whatever. He then inquired what he had been doing before passing the urine in which the albumen was found by the life insurance examiners, and, learning of the boxing, he secured specimens which were passed for several successive days just after taking this exercise, and found albumen and casts in them all. The importance of one such case as this, he thought, could not be exaggerated.

In speaking of the supposed effect of imperfectly digested albuminous food in producing albumen, he stated that it had been found that if the albumen of eggs were injected into the blood, it would not be assimilated, but might be recovered from the urine, into which it passed. Hence it had been argued by some that if albuminous food were eaten in excess a portion of the albumen would not be digested, and would appear in the urine. With a view of testing the correctness of this view he had experimented very thoroughly on himself, repeatedly taking as many as six eggs at a meal, both raw and cooked in various ways. On no occasion whatever was this ingestion of egg-albumen followed by the appearance of albumen in the urine, and the same was true in the case of a number of friends of his whom he had persuaded to try the same experiment. In one instance, it was true, the examination of the urine showed the distinct presence of albumen; but on investigation it was ascertained that albuminuria existed in this case whether eggs had been eaten or not. Some eighteen individuals engaged in this experiment, and he was therefore inclined to believe that the hypothesis of imperfectly digested albuminous food as a cause of albuminuria was not well founded.

From his investigations of the whole subject of albuminuria, Dr. Griswold arrived at the conclusion that the kidneys were probably liable to be affected with slight and transient disease just as other organs of the body were; and in this connection he related the case of a young physician who for seven years after an attack of scarlatina, which occurred in his youth, was the subject of albuminuria. For the last four or five years, however, his urine had been entirely free from albumen. He also mentioned the case of another physician who five years ago was seized, at the same time with an ordinary cold in the head, with a sharp pain in the lumbar region. He attributed this simply to lumbago, but a medical friend having jokingly suggested that he had better examine his urine to see whether he was not suffering from Bright's disease, he did so, and found to his surprise that it contained not only albumen but hyaline casts also. After five days, however, both the albumen and casts disappeared, and had never since been detected in his urine.

The discussion of the paper was opened by Dr. Austin Flint, Sr., who said that in addition to the subject of albuminuria he should like to have that of the significance of casts also considered; since these, like albumen, were not infrequently present temporarily in the urine of those in apparently perfect health. Such conditions of the urine were apt to lead the attending physician to make a prognosis which was not borne out by the subsequent course of events. He then related the case of a young girl of fourteen in whose case it was accidentally discovered that both albumen and casts were present in the urine. After a time, however, they disappeared altogether, leaving her in excellent health.

Dr. William H. Welch remarked that every one who was accustomed to examining urine at all on a large scale from time to time met cases such as had been described, in which if there was any disease of the kidneys at all it must be of a very trifling character. Medical students were sometimes surprised to find albumen in their own urine, he said, and he then mentioned the case of one to whom this occurred only two days before. The young man was apparently in good health, but had been working unusually hard. To the presence of albumen alone, and sometimes to that of casts in addition, he would attach no significance, and he thought it was often hazardous to make a diagnosis of Bright's disease even when, in addition to these, some impairment of the health was noticeable.

Dr. E. G. Janeway related the case of a broker, in apparently good health, whose urine, passed early in the morning or late at night, when the cares of the day were over, never contained any albumen, but which was actually loaded with it at most other times, a fact which he was disposed to attribute principally to nervous influence. A moderate amount of albumen in the urine when taken by itself was not now regarded as of much consequence, but in this instance the quantity of albumen was so exceedingly large that although the individual was still apparently in excellent health it would be a matter of great interest to watch the future history of the case. The case which had been related in the paper as having been under his care was even more remarkable. After the gentleman had taken his boxing lesson there were always hyaline and sometimes granular casts as well as albumen in the urine, and the case would seem, therefore, to show that it did not take as long for hyaline casts to form as had generally been supposed.

Dr. Flint having called attention to the fact that the occurrence of uræmic poisoning depended not on the presence of albumen in the urine (since this was sometimes altogether absent in uræmia), but on the amount of urea eliminated, as roughly indicated by the quantity of urine passed, and on the specific gravity, Dr. Griswold closed the discussion. He hoped, he said, that these cases of transient albuminuria would be carefully watched and followed up so that it might be seen what developments, if any, had occurred in the course of five, ten, fifteen, or twenty years.

The next order of business was the

PRESENTATION OF AN ACEPHALOUS MONSTER

by Dr. Daniel Brown. The labor was premature, coming on at the end of seven and a half months, and the delivery of the monstrosity followed that of a well-developed male fœtus, which lived until the following day. Dr. Brown stated that each separate fœtus had its own membranes and an entirely distinct placenta, the placentæ being attached at some distance from each other, and expressed the opinion that the acephalous fœtus was not dependent upon the other fœtus for its nutrition (as was ordinarily accepted in such cases), but that there was a direct continuity of circulation between the former and the mother.

The specimen was discussed by Drs. William H. Welch, J. Lewis Smith, and S. S. Purple, after which Dr. Austin Flint, Sr., made some remarks on

SCARLET FEVER

in connection with the paper read by Dr. Charles A. Leale at the last meeting of the Association on Scar-

latina in the Fœtus in Utero and in the Mother at the Ninth Month of Pregnancy. He said that personally he had seen no case of the disease occurring during pregnancy, but he had met with one instance of it occurring immediately after pregnancy. The patient, whom he saw in consultation with the late Dr. J. O. Stone, was twenty-eight years of age, and the child had been born two days when she broke out with the eruption of scarlet fever. The urine was slightly albuminous, and the lochial discharge and secretion of milk had ceased, but within twelve days she was convalescent. Two weeks afterward, however, he was again asked to see the patient, when he found that she was suffering from an attack of rheumatism accompanied by abundant albuminuria. She was then in a somnolent condition, and soon afterwards died. The child caught the disease from the mother, and therefore he thought it reasonable to suppose that the mother contracted it either just before or just after delivery. The infant recovered.

Dr. Flint then touched briefly on a few points which he said had occurred to him in looking over the notes of his cases of scarlatina. The first was the extraordinary vitality of the contagion, and one of the cases which he related to illustrate this was the following: A young lady, the daughter of a deceased physician formerly well known in New York, having entered one of the Protestant Sisterhoods was called upon to nurse a child suffering from scarlet fever. This she did for ten days, and after having aired the dress which she had worn during this time very thoroughly for several weeks she put the skirt of it away in a trunk. Eleven months afterward she wore the skirt for the first time after putting it away, and one week after she began to wear it she was herself attacked with acute diffused nephritis and pulmonary œdema, which proved fatal. The most thorough disinfection was, therefore, essential in every case of scarlet fever. He next spoke of the frequency of the occurrence of acute nephritis from the scarlatinal poison, the kidney complication in this disease being due not to cold, as was often imagined, but to the essential nature of the affection. He then mentioned the liability of cases to occur occasionally without eruption, and related one which he had met with in 1874, in which there was no eruption and no sore throat, but in which acute desquamative nephritis and also desquamation of the cuticle occurred. Having mentioned that there was some danger of death from heart-clot in scarlatina, and spoken of the good effects of cold baths in the disease, he concluded by a reference to the benefit of alcohol in the essential fevers in general, which he thought might, perhaps, be due to the fact that this agent acted in reality as a germicide, and by this action served to assist in sustaining the powers of the patient.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

APRIL 9, 1884. Meeting called to order at eight o'clock, DR. R. T. EDES, chairman, presiding. A summary of the records of the last meeting was presented by the secretary.

DR. F. I. KNIGHT read a paper on the

LARYNGEAL COMPLICATION OF PULMONARY PHTHISIS,

dwelling especially on those which are considered almost pathognomonic, that is, those of infiltration or ulceration, or both these processes combined. He described at some length the laryngoscopic appearances of these lesions, and said that while they usually followed the pulmonary disease in order of development they probably preceded it in exceptional cases. The diagnosis was usually not difficult, but in doubtful cases anti-syphilitic treatment should be tried.

The prognosis was undoubtedly bad, but in some cases the laryngeal manifestation entirely disappeared. These cases afford a strong argument against the universal theory of tubercular infiltration.

In regard to treatment, Dr. Knight said that a mild climate, or even a warm, moist one, seems to suit these cases better than the cold, dry air of high elevations, which was so beneficial to cases of incipient disease of the lungs alone. Semi-solid food, taken cold, as a rule, suits best.

Judicious local treatment not only makes the patient infinitely more comfortable, but also in certain cases apparently brings about an arrest of the local disease. The old plan of cauterizing these ulcerations was bad. The whole local treatment of tissues so feebly nourished should be very gentle. In the first place the mucous membrane should be kept as clean as possible by the use of alkaline sprays. Weak astringents may be added or used afterwards. Carbolic acid in weak solution and iodoform do good in some cases. When there is much congestion and swelling, the frequent use of finely powdered ice was advised. Scarification does no good, but rather harm, unless there is a translucent œdema. Cutting into a small-celled infiltration only makes troublesome cicatrices. The careful passage of bougies into the œsophagus sometimes gives relief by producing absorption or diminishing the great irritability of the mucous membrane. Morphia powders, combined with sugar or starch, blown into the throat an hour before the principal meal, often give great ease in deglutition. Mild vapors of volatile substances like the oil of pine may be very grateful.

Tracheotomy may be necessary to avert asphyxia, but experience has not sustained the theory that cure of the laryngeal disease is facilitated by the rest to the organ secured by an earlier performance of this operation. Brushes, sponges, and all rough methods of making applications to the larynx should be, as a rule, avoided in this disease.

DR. CUSHING stated that he had very little to add in the way of therapeutics to the admirable suggestions contained in Dr. Knight's paper. A consideration of the pathological condition of the tissues surrounding tubercular ulcers, crowded with imperfectly developed small cells, was sufficient to make any attempt at healing them hopeless. In hospital out-patient practice and where the smell of iodoform was not objected to he had found the insufflation of that substance, powdered and mixed with one half its bulk of gum arabic, to be of great relief. The friends of the patient could easily learn to blow it on to the larynx without any mirror, for if a curved powder blower were steered beyond the epiglottis it was easy to diffuse the powder with tolerable accuracy over the diseased surfaces, and even in time the patient could learn to receive it in in-

spiration so that a part would come into the trachea, which was often inflamed and ulcerated.

A mixture of morphine in glycerine made pretty strong, so that ten drops would be a dose, and this applied with a spoon to the back of the tongue and allowed to trickle down over the larynx, frequently gives great relief.

Dr. Cushing had little respect for the operation of tracheotomy as a means merely of prolonging life in these cases, believing that when bad enough to cause death it was a kindness not to interfere in such hopeless cases; something might at times be said for the operation when required for relief of pain.

Dr. Cushing, by request, exhibited some of his microscopical preparations of tubercular larynges, showing how the small cells are first deposited along the tracks and at the forks of the smallest vessels; then the swollen mucous membrane of the infiltrated larynx was shown crowded with small cells, which in the neighborhood of the ulcers were so thick that no other tissue was discernible. At the edges of the ulcers it could be easily seen that the agglomeration of small cells had rendered the part incapable of self-support, and that increasing numbers when newly formed must swim off as pus or keep together as best they could in granulations or badly-nourished vegetations, the origin of some of which was demonstrated. Some sections of the trachea showed a precisely similar process there; the nutritive support of parts of the cartilage of the rings being cut off the part dies and is finally thrown off, leaving a deep "punched" ulcer, more or less covered with weak granulations.

Dr. Cushing during his remarks spoke of the fact that cases of tubercular disease of the larynx frequently occur when the most careful examination can find no disease of the lungs until long afterward, and although theoretically it has been maintained that such trouble in the larynx must be secondary to disease in the lungs or cheesy deposits elsewhere, yet practically the throat symptoms are often sufficiently pathognomonic when no disease of the lungs can be detected, and thus constitutional treatment can be commenced or change of climate advised at an early date of the disease, although with poor chance of success. He suggested that according to modern theories such cases of apparently primary laryngeal tuberculosis might easily be such in reality, being caused by direct infection from particles or bacilli in the air inspired.

Dr. Hooper remarked that he had been much interested in the paper, and agreed with the reader in the importance of always obtaining confirmatory evidence of disease in the lungs, and a careful history of the patient, before making a diagnosis of laryngeal phthisis. We meet with the diseases in the larynx in more than one variety, and the appearances are so different in the different stages of each variety that a positive diagnosis cannot be made without undoubted signs of chest lesion. In fact, in all the ulcerative processes of the larynx, whether due to syphilis, carcinoma, lupus, or diseases of the lungs, a detailed history of the case, and evidence of disease in some other part of the body, is necessary before we can decide upon the exact nature of the destructive process. Even if we followed the plan of Fränkel and others, and, in doubtful cases, wiped off some of the discharges from the interior of the larynx and found therein the bacilli peculiar to tubercular disease, we would then only be justified in eliminating with certainty syphilis and carcinoma; but whether we had to do with lupus, tuberculosis, or even leprosy, would still be an open question, unless, as already stated, we discovered other manifestations of one of these tubercular diseases in a different region of the body.

With regard to the question as to tuberculosis occurring primarily in the larynx, Dr. Hooper thought that any one who accepted Koch's discoveries must believe that such could be the case. If the disease in the larynx arises from the presence of the tubercle-bacillus in the sputum coming from the lung, why should not the same specific parasite when inhaled produce tuberculization of the tissues, provided always, of course, that the laryngeal mucous membrane is in a proper condition to receive it, and there is a hereditary predisposition on the part of the individual.

Dr. T. A. DeBlois said that often a great amount of comfort may be derived from scarifying the ary-epiglottic folds in those cases which are accompanied by much swelling, so that the epiglottis cannot properly close, and the patient is constantly choking from particles of food or drink which enter the air-passages with each act of deglutition. He has never seen any undesirable result follow this procedure. He never has observed ulceration of the cicatrix in these cases. In two cases he has seen laryngeal ulcerations heal under the use of iodoform, but in each case they broke down again after a few weeks. In one case in which the patient had been able to take no solid food for months, by the use of iodoform he was able to resume solid food for another full month. No other known form of treatment has ever accomplished more favorable results.

Dr. DeBlois showed an improved form of powder-blower for laryngological purposes.

Dr. W. J. Otis showed a powder-blower of a pattern originally brought from Vienna, but upon which he had adapted improvements which facilitated its manipulation and added to its usefulness.

In connection with the use of iodoform in tuberculosis of the larynx, Dr. E. W. Warren stated that he was working in Schrötter's wards in Vienna at the time when this became the regular treatment. Before this about one fourth of a grain of morphia was blown in. The improvement was very marked, and though not recalling that he saw any ulcers entirely heal, there was great diminution of infiltration, and the pain was less than under the morphia.

Dr. J. W. Farlow remarked that he had seen laryngeal ulcers heal, at least temporarily, in dispensary practice, under the use of iodoform. A gain of six or eight weeks is a great thing to these poor patients. Often the larynx is diseased for a considerable time before any disease of the lungs can be detected.

Dr. Bowditch agreed with the general tenor of the remarks of Dr. Knight upon the very great value of topical applications in diseases of the larynx, whether connected or not with pulmonary complications. But Dr. Bowditch could not wholly condemn the use of the nitrate of silver as injurious in these cases. It is well known that the late Dr. Horace Green, of New York, published nearly forty years ago a volume [1] the object of which was to convince the medical profession that nitrate of silver applied at times in a strength of thirty to forty, or even eighty, grains to the ounce of water,

[1] A Treatise on Diseases of the Air Passages. . . . Chronic Laryngitis, Clergyman's Sore Throat, etc. New York and London: Wiley & Putnam. 1846.

might be applied not only without danger to the larynx, but at times with great relief and final cure in some of the most obstinate and long-continued cases of laryngeal disease. Dr. Green also applied the solid caustic to specially enlarged follicles in the throat. Dr. Bowditch, however, had gradually given up the nitrate of silver for the liquor iodinii compositus, as the latter seems more agreeable to the patient and is equally efficient. Dr. Bowditch, moreover, without employing the laryngoscope, for his powers of sight prevented it, had always used a fine camel's-hair brush. With this he was sure that he could touch the vocal cords, often without the least choking. He knew so because the voice improved *immediately* in certain acute cases, and patients were cured after a certain number of such applications, made usually three times a week, and gargling with alkaline or other fluids three times daily. Dr. Bowditch found all spraying and powder blowing objectionable because of the choking that is often produced by them. Moreover, an expensive apparatus is needed, whereas the brush is a simple apparatus which every general practitioner can and ought to have.

There is, however, some art needed in making the application. One case that happened soon after commencing the course of topical applications had taught Dr. Bowditch that the operator must always be sure that the patient has *drawn a full breath, and is about to expire.* Let the vocal cords be touched *at that moment* and no spasm will occur. Let, on the contrary, the touch be made at the instant of inspiration, and violent results may occur. In the case above alluded to, and in which this blunder was committed, the patient threw himself upon the floor, and for a time *seemed* choking. No evil resulted, but a very great discomfort, which latter should be avoided if possible. In addition to the above rules Dr. Bowditch is accustomed, before treating the larynx, to make an application to each tonsil and to the back of throat, allowing the patient to breathe in the intervals. In this way the patient will be gradually led to believe that the final operation will be equally slight. It usually causes *no trouble*, except heat in the parts, although the patient feels that the operator has "touched the spot." Often a clearer voice and ease in speaking will be apparent in a few minutes.

Dr. Bowditch would dwell upon the various points in this simple operation, because each one is important for the *comfortable* performance of it.

Any discussion of the subject of laryngeal phthisis brings up a great number of important questions: What do we know about tubercle at present? How may we recognize tubercular from other forms of ulceration? Each of these single topics would form an inexhaustible subject of investigation and discussion.

DR. KNIGHT thought that Dr. Bowditch's method of applying medicines was a very good one, and would undoubtedly be a safe one to follow. There can be little doubt that tuberculous ulcers may sometimes heal, and the enormous swelling and other symptoms may quite disappear. Unquestionably this conduces greatly to the patient's comfort for a part and frequently for the whole remaining period of life. In regard to the possible arrest of the laryngeal disease three remarkable cases came to his mind at the minute. In all three the swelling of the cartilages was very great, the ulceration well marked, and the dysphagia distressing. There were positive signs of pulmonary disease in the first two, but not in the third. The swelling and ulceration almost entirely disappeared, and deglutition was relieved in the first two, but the patients died, one with symptoms of meningeal tuberculosis. In the third the signs and symptoms disappeared, with the exception of slight swelling of the epiglottis, and slight loss of substance in one vocal cord, and the patient has remained well, without any tubercular symptoms in larynx or lungs, for a year.

DR. J. V. MOTT, of New York, asked the reader if he had observed the effect of iodide of potassium internally in laryngeal phthisis? to which DR. KNIGHT replied that he had seen no beneficial result from its employment except in mixed cases or those which were undoubtedly syphilitic.

DR. MOTT remarked that this medicine was much used in the Metropolitan Hospital in New York, but the character of the cases is often very difficult to determine, as syphilis is frequently present.

In reply to a question as to the utility of general treatment and the results to the patients, DR. KNIGHT replied that hygienic and other appropriate methods of treatment should be diligently pursued in all these cases. The value of topical applications is much enhanced by a generally invigorating treatment for the whole system.

DR. G. L. WALTON read a paper upon

HYSTERIA AS AFFECTED BY REMOVAL OF THE OVARIES.[1]

DR. JOHN HOMANS spoke as follows: I think this operation cannot yet be definitely judged or accurately valued. I consider it to be still on trial. Many successful cases are reported, and others which are not favorable. Alienists and psychologists are divided upon this subject, some recommending the operation in selected cases, while others are not friendly to it under any circumstances. The removal of the ovaries should be thought of in relation to painful menstruation, and consequently in those conditions which depend upon or are induced by painful menstruation. In skillful hands the operation of ovariotomy and the other more common operations of abdominal surgery are no longer so dreaded as they were a few years ago, and the results of ovariotomy to-day are equally as favorable as those of capital operations of the extremities. Abdominal surgery is different from other surgical procedures, and cannot be taught; it must be learned by observation and experience.

Thus far I have operated upon three cases of the kind to which attention is directed in the paper of Dr. Walton. The first patient was a lady twenty-two years old, very bright and intelligent, highly educated, and thoroughly refined. Menstruation had always been irregular and painful. As the disease proceeded the patient first became hysterical, then gradually grew to be destructive, and finally became insane. It was thought that removal of the ovaries might have a beneficial effect, and the case was first brought to my notice by her friends, who sought my opinion in regard to this means of relief. There was at that time great tenderness in the left iliac region with rigidity on touching the part. She had already spent one whole year in bed at her home, and had passed a year at the Adams Nervine Asylum. She had been the frequent subject of gynæcologists and of specialists of various kinds. Finally she was placed in an insane asylum

[1] See page 529 of this number of the JOURNAL.

and was kept quiet by means of morphia. The pain was still present in the left side and much worse at the menstrual epoch. At such times the application of leeches to the *os* generally afforded some relief, but the case was gradually becoming worse and it was feared that her insanity would eventually become chronic.

In March, 1883, I removed both ovaries, with the Fallopian tubes. The patient did perfectly well and made a good recovery from the operation. Soon she began to experience relief from the old distress, and the iliac pains entirely left her. Then the headache diminished, and she became again a bright, intelligent, and perfectly sane person. She began to write, and furnished considerable manuscript for one of the daily papers. Finally her correspondence was intercepted by the family, and it was found that she had resumed the use of morphia, using the money earned from the newspapers to surreptitiously purchase the drug. On being reasoned with she promised to give up the morphia, which she did by gradually diminishing the dose until for months she has taken none at all. On examination the uterus was found to be in an infantile condition, about half the size of the thumb. From this time no unfavorable symptoms have shown themselves, and the patient and her friends consider the result as very successful.

My second case was a young lady who has had a somewhat celebrated history, from the fact that the disordered mental condition had been of some years' duration, and was of a very striking character. This patient was the subject of a scientific essay by Dr. W. B. Goldsmith, under the title of A Case of Moral Insanity, in the *American Journal of Insanity* for October, 1883, and a few extracts from her history as given by Dr. Goldsmith will clearly set forth her condition. He says: —

"The patient is a girl eighteen years old, rather short and small, but of well-knit muscular figure, and very active and strong. Her head is fairly well formed, though slightly inclined to the bullet pattern; her expression amiable and bright, and her general appearance calm. In her seventh year she had a severe attack of scarlet fever followed by a marked change in her mental condition. She became easily excited; seemed unable to apply her mind, and though apparently not malicious, could not be made to obey. Her father committed suicide at about this time, and this appears to have been the first occasion when she seems to have completely lost self-control. Soon after this she was sent to school, where she caused much trouble in various ways, and the teacher declared she spoiled the discipline of the entire school. After this she became subject to violent paroxysms of temper in which she would scream and throw herself about and break furniture and tear clothing. When between eight and nine years old, she was found naked bathing with some boys, and at this time admitted that she had frequently indulged in sexual dalliance with boys older than herself. She was now placed in various "Homes," from each of which she was dismissed on account of her violent and destructive paroxysms, and because she could not be made to observe any rules or regulations. She finally was placed in the Hospital for the Insane at Taunton, Mass., when nine years old, and there remained four years. No intellectual impairment was there detected in her, but she was thought to be in a condition of moral insanity. Dr. W. H. Gage wrote of her, 'she was an extremely difficult patient to manage.'

"From the Insane Hospital at Taunton she was removed to a similar institution at Worcester where she remained about twenty months, whence she was removed by her friends contrary to the advice of the hospital authorities. She remained quite well for four months, when on some trivial occasion she became much excited and leaped from the roof of a veranda, and was found screaming and maniacal on the walk below. The mania lasted two days, when she was placed in the Lunatic Hospital at Danvers. At this time her attacks of violence were generally induced by some slight disappointment or irritation, and would commence by attempting to destroy windows, pictures, or anything fragile. She was very violent toward her attendants, striking them and tearing their clothing and hair in a most vicious way. She has shown violence to every attendant with whom she has been for any length of time. Since her admission to the asylum at Danvers she has taken a variety of drugs, and exhausted the list of punishments and rewards practicable in a hospital for the insane. She has been kept thoroughly under the influence of bromides for weeks together; and the same is true for a less time of chloral hydrate; she has taken iodide of potassium, and has been overpowered by hyoscyamine; she has battled with various forms of mechanical restraint, and has demolished many; has tried every grade of ward, from the most violent to a parole ward where she came and went at will, and all without any perceptible injury or advantage."

I operated upon this patient last July, and removed both ovaries together with the Fallopian tubes. The wound healed by first intention, and she returned home in four weeks, and has been at home ever since. She has appeared to be perfectly well since the operation. Not a drop of menstruation has appeared since the ovaries were removed. Dr. Rowe has expressed the fear that a relapse of the mental disease might recur in these cases even after one or two years. In this case any hæmorrhage seemed to be a sufficient cause for a paroxysm, and the menstrual exacerbation was thought to be aggravated by the fact that it was of hæmorrhagic character, and the removal of the ovaries seemed to be beneficial in the way of preventing this recurrent loss of blood.

The third case was not a suitable one for this operation. The mental disease was of ovarian origin, coming on suddenly soon after marriage, and might, perhaps, have been benefited by an operation at an earlier date. There was undoubtedly commencing dementia before the ovaries were removed, and the patient's condition has become steadily worse from that time. The wound healed by first intention, and not a drop of menstruation has appeared since that time. The patient has become very violent and destructive, and has made dangerous attacks upon her attendants and upon other patients. She destroys her clothing, and has become filthy, passing her dejections in bed or in her garments. In this case removal of the ovaries has not benefited the patient, but the case has probably progressed exactly as it would have done if nothing had been attempted.

It is of no use to remove the ovaries by the vagina, but if the operation is to be done at all it should be by the abdominal incision, and the tubes should also be removed, when a much more favorable result may be expected.

Of these three cases the first may be classed as one

of hystero-mania, the second as one of pure hysteria, and the third at present as advancing dementia.

DR. CUSHING inquired who it is that gives consent to a capital operation when this becomes necessary in an insane patient.

DR. HOMANS replied that the consent of the guardians or next friends must in all cases be obtained, and also the consent of the patient. Few patients to whom this operation might be expected to prove of benefit are so insane as not to be able to understand and consent to its performance.

DR. ROWE stated that he had seen many cases of each of the diseased conditions mentioned by Dr. Homans which have exhausted all the resources of asylums, but he had never thought of ovariotomy as a means of treatment. This should be henceforth taken into more careful consideration. In all capital operations the consent of the natural or constituted guardians of the patient as well as his own should first be obtained.

DR. PUTNAM remarked that he had had no experience in this method of treatment of insanity. The operation would seem to commend itself even in cases in which the ovaries are not diseased. In many cases in which nervous symptoms are prominent the cure may be aided by judicious control of these functions. In ovarian troubles it may be useful to remove the periodical stimulation of these organs. In many instances of trephining, the nervous symptoms have been benefited or entirely relieved, when no fracture was found, no depression of bone existed, or any other evident mechanical interference with the functions of the cerebral structures could be anywhere observed. In like manner the supra-orbital nerve is cut in cases of spasm of the eyelid, followed by relief to this condition. It is thought to act by removing one source of irritation to the motor centres.

DR. HOMANS added that removal of the ovaries with cystic degeneration of their structure is sometimes followed by insanity. This operation is still young in its relation to mental disease, and is liable to abuse. It should be especially guarded in its application to these unhappy cases, and should be done only as a last resort. In one case in which the ovaries were removed per vaginam the condition of the patient was much worse than before the operation. If the tubes had been taken too, the result might have been different. Such a person ought not to be allowed to breed, and if anything is attempted, both ovaries and both Fallopian tubes should be removed, and thus the utmost possible good be accomplished for the patient.

In one case of double ovariotomy the patient has flowed regularly and irregularly ever since that time. Removal of the ovaries does *not* cure dysmenorrhœa. This important fact should not be forgotten in advising any operation short of complete extirpation of both ovaries and Fallopian tubes.

DR. J. J. PUTNAM said he had had no experience in the use of Battey's operation, but was quite prepared to believe that its effects might be beneficial both where the ovaries are diseased and even in some cases where they are not. The favorable action of the treatment in the latter group would probably be due to a restriction of the activity of the nervous system within narrower bounds.

AN ANTISEPTIC ABSORBENT PAD.

DR. FARLOW exhibited an antiseptic pad which had been devised for the benefit of ladies while traveling or while menstruating and after parturition. It is made of coarse cheese cloth, and is filled with borated absorbent cotton, and can be easily prepared by any one. This pad is for sale by druggists at one dollar a dozen.

SENILE GANGRENE.

DR. FITZ showed a series of specimens from a case of senile gangrene operated on by Dr. Warren, and reported upon by him at a meeting of the Society for Medical Improvement, March 24, 1884.[1] No untoward symptoms occurred till within twenty-four hours of death, and the appearance of the wound was favorable till that time. At the autopsy the edges of the wound were firmly adherent throughout the greater part of its circumference, and there was no discoloration or swelling. Both popliteal and anterior tibial arteries were found calcified just below the popliteal space, and both contained thrombi. Venous thrombosis extended upwards from the amputated stump into the femoral vein, terminating just below Poupart's ligament. The thrombus was pale-red, friable, and softened centrally.

Several branches of the pulmonary artery of both lungs, at least a line in diameter, contained reddish-gray thrombi, and at the base of the right lung there was a peripheral nodule of hæmorrhagic infarction of the size of a walnut. Both lungs were œdematous, and the right pleural cavity contained four ounces of opaque pink fluid, the pleural surfaces being besmeared with a thin yellow membrane. There was no necrosis of the pleura.

The spleen was more than twice the usual size, intimately adherent to the abdominal wall and to the omentum. It was dense and heavy, the surface irregularly depressed and nodulated from the presence within the organ of numerous nodules of anæmic necrosis, varying in size from that of a plum to that of a hazelnut. These patches were often porous on section from the presence of numerous cavities containing a relatively clear fluid. Between the necrotic patches the spleen was indurated and reddish-gray in color, while scarcely a trace of splenic structure was to be found normal in color and consistency. A circumscribed patch of thickened intima of the aorta was present, which included the origin of the cœliac axis and the superior mesenteric artery. The former was entirely occluded by fibrous tissue, and the calibre of the latter was diminished one half for a short distance from the aorta, and then was considerably dilated.

The hepatic branch of the cardiac axis was dilated, the splenic artery was narrowed, its walls thickened, and its cavity completely obliterated throughout its entire course by means of an adherent, dark-red, firm thrombus. The splenic vein was also obliterated by a reddish-gray, centrally-softened thrombus, which was continued into the portal vein. The trunk of the latter was filled with the thrombus which extended into the hepatic branches of this vessel.

Peripheral portions of the liver showed a nutmeg appearance, and a nodule of anæmic necrosis the size of a plum was found.

There was a varicocele of the right side, the spermatic vein entering the right renal vein. A moist, dark-red, distending thrombus was continued from the immediate vicinity of the testicle into the right renal

[1] See Boston Medical and Surgical Journal, 1884, xv., 349.

vein, whence it extended towards the inferior vena cava as a thrombus the size of the tip of the little finger.

The chief interest of these specimens lay in the evidence of long-standing serious disease without striking symptoms at the time of the operation; also in the comparatively slight alterations of the liver, despite the obliteration of the cœliac axis and the obstruction of the portal vein. Embolism of the pulmonary artery was to be regarded as the immediate cause of death, while the thrombosis of the renal vein was presumably of marantic origin, and might have been not above twenty-four hours' duration.

Three varieties of thrombi were present, each independent in origin from the others, and neither having given rise to recognizable symptoms till the day before death, when the occurrence of pulmonary embolism was suggested. The stomach gave evidence of extensive softening of the mucous membrane, with putrefactive emphysema, although neither condition was associated with the usual favoring circumstances.

ACTINOMYCOSIS.

DR. W. F. WHITNEY showed a specimen of actinomycosis, the first ever exhibited in New England.[1] It occurs in horses, cattle, sheep, etc., and has been frequently observed in Europe. This specimen was from a heifer, and was sent to Professor Lyman, of the Harvard Veterinary School, and by him referred to Dr. Whitney. The disease was located on the lower jawbone, and was as large as the two fists. The character of the growth is fibrous, and shows large numbers of patches of a yellow color, which contain lime salts, and also masses of the parasitic growth.

DR. FITZ stated that this disease has been observed in isolated cases in the western part of the United States, but that this is the first case reported in this vicinity. The disease can be communicated to man from the domestic animals. Usually the jaw is the part first attacked, and from this point the disease may extend to the thorax, spine, and elsewhere. The origin of the fungus is not yet definitely known. It has been thought by some to enter the organism by means of defective teeth.

Adjourned at 10.15 o'clock.

Recent Literature.

Principles of Theoretical Chemistry, with Special Reference to the Constitution of Chemical Compounds. By IRA REMSEN, Professor of Chemistry in the Johns Hopkins University. Second edition. Thoroughly revised and enlarged. Philadelphia: Henry C. Lea's Son & Co. 1883.

This book is divided into two parts. The first part is devoted to a general discussion of atoms and molecules. Chapter I. treats somewhat in detail of Dalton's investigations, the atomic theory, and the methods which we possess for the determination of atomic weights dependent upon purely chemical processes. Chapter II. treats especially of Avogadro's hypothesis, and its application in the determination, primarily, of the molecular weights of compounds and elements, and, secondarily, of atomic weights. Chapter III., the relationship between specific heat and atomic weight. Chapter IV., the schemes of D. Mendelejeff and Lothar Meyer for showing the connection between the atomic weights and properties of the elements. Chapter V. is on the valence or atomicity of the elements. The second part treats at considerable length of the constitution or structure of chemical compounds.

The book has been thoroughly revised, the most noticeable changes being found in the chapters on valence and constitution. A short chapter on the physical methods for determining the constitution of chemical compounds has been added.

In his preface the author says: "I have endeavored to discuss in an impartial way, as objectively as possible, the principal hypotheses which at present play important parts in the science of chemistry." "My object has been to point out as clearly as I could the exact connection between the facts known to us and the hypotheses."

We find in this book the most impartial and satisfactory discussion of the above subjects which we have seen, and we cordially recommend it to those who wish to familiarize themselves with the fundamental hypotheses connected with the science of chemistry, and with the facts which suggest these hypotheses.

New York and Brooklyn Formulary of Unofficinal Preparations. Published by a Joint Committee of Delegates from the College of Pharmacy of the City of New York, the New York German Apothecaries' Society, and the Kings County Pharmaceutical Society. Publication Office: College of Pharmacy Building, New York. 1884. xii. 46 pages.

This is a collection of eighty-one practical formulas for such preparations of the so-called "Elegant Pharmacy" as appear to have established a claim to some recognition, and have survived out of the endless number offered to the medical profession. They are now respectfully submitted by the committee with the very reasonable request that physicians should abstain hereafter from designating the maker's name of any preparation for which a formula is found in this pamphlet, that thus both physicians and pharmacist may be sure to obtain uniform preparations, no matter where they may be dispensed. The preparations mentioned are fifty-two elixirs, ten emulsions, two extracts, one liquor, five spirits, six syrups, two tinctures, and three wines.

The universal use of such formulas would prove as beneficial to the medical profession in this State as they will in New York. B. F. D.

A Handbook of Therapeutics. By SIDNEY RINGER, M. D., Professor of the Principles and Practice of Medicine in University College, London. Tenth edition. 688 pages. New York: William Wood & Company.

This last edition of a valuable and widely read work differs very little from the previous one. The changes are few and of minor importance, among them are a short page on Eucalyptus, a rather longer mention of the salts of manganese, and the addition of a few paragraphs about salicine. In its present form this suggestive Handbook will doubtless continue to prove useful to a large number of physicians.

[1] See page 532 of this number of the JOURNAL.

Medical and Surgical Journal.

THURSDAY, JUNE 5, 1884.

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THE "TAXATION" THEORY OF EXPERT TESTIMONY.

MANY are the remedies which have been suggested for the obvious failures and defects of our system of expert testimony. But it is difficult to see what improvement is to be looked for in the value of such testimony either from a scientific point of view or as an instrument to the furtherance of justice from such a position as that which is taken by Mr. Rossiter Johnson in the current number of the *North American Review*. His theory is that the demand of the State upon the expert witness is to be considered as a species of taxation, and while no system of taxation has ever been devised which is absolutely equitable, yet that the levy by the State upon the capital of the professional man (that is, his time and his scientific acquirements) according to her needs, without compensation, is consistent with justice and equity. According to this view no distinction should be made, at least so far as concerns subpœna or compensation, between expert and ordinary witnesses. Both alike, together with the jurymen, are to give their services for the good of the State without recompense, or, rather, the nominal fee tendered is supposed to represent the bare cost of living for the time occupied, which sum the State is bound to exempt from her claim. The men who are called upon to serve in court, whether as jurors or witnesses, pay a varying tax according as their time and services are worth much or little. Only the day laborer is exempt; his tax is remitted to him in the form of a fee, and this simply because it is all he has to live upon, and the State cannot beggar him. The case is compared to the laying of the income tax in our late war. Incomes up to $600 were exempted from taxation on the ground that so much was necessary to subsist upon, but incomes over that amount paid the whole tax, which, therefore, fell very heavily upon the wealthiest people. So, during the conscription in our late war, men were enrolled for military service, with practically no compensation, because the country needed their aid. The day laborer received enough barely to keep him and his family from want, and no more was given to the ex-clerk, engineer, or lawyer who had been earning his one, three, or five thousand per year. In fact, in this case of urgency the tax was still more oppressive and arbitrary, for the conscripts gave not only their time but in many cases their limbs and lives; and each hundred men that were enlisted might know in advance that a certain number of them, on the doctrine of averages, never would come back.

All this is intelligible, nay, more, it is right, for under all government it must sometimes happen that the welfare of the individual should give way before that of the public, and we accept the parallel for jury service, suffrage, and such other universal duties of citizenship. If a man by chance witnesses a crime it is doubtless his duty to attend in court and give his evidence, though it may involve a loss of a hundred dollars in his business, for which he receives in compensation only the regular fee of fifty cents. To-morrow a part of the debt will be repaid to him in the discharge by his neighbor of a similar duty of good citizenship, and the chances are that not for many years, if ever, will he again be thrown into circumstances where such a duty will be placed upon him. True, if his calling is one which specially exposes him to the liability of becoming cognizant of crime (as does that of a physician) he must be prepared to meet this additional tax which society places upon him.

But here, it seems to us, the analogy ends. Beyond what, as a member of society, he sees and hears, the physician should not be held subject to this taxation of time and talents. A murder is committed. The physician was in no sense a witness to it, in fact, knew nothing about it. By reason of special training, opportunities, or advantages on his part, however, he is able to form an opinion which is of value in solving some problem connected with the crime. His opinion is, therefore, sought for the purpose of "furthering the ends of justice." Having once gone through the special mental drill necessary to forming and formulating such an opinion, he is still better able to do it a second time, and is, therefore, even more important in furthering the ends of justice, until finally his whole time may be taken up with this sort of work.

Let us be impartial in this matter. Whatever claim the State has upon the physician as a good citizen, to "further the ends of justice," by giving his time and labor in the elucidation of cases of which he was not personally cognizant, precisely the same claim exists upon judge and attorney, sheriff and constable. They also are bound to give their best services whenever asked to further the ends of justice. But the State has, and with good reason, made these officials its employees, because they possess qualifications and opportunities above those of the average citizen for the detection of crime, and if these qualifications were to be "taxed" instead of recompensed, a gross injustice would be done to a particular class of men. For exactly the same reasons should the expert witness receive compensation from the State for the equally valuable service which he renders her. Whether this official shall be a member of a permanent board and be paid an annual salary, as in some of the countries of Europe, or whether as merely a man of recognized and approved authority in his specialty, whatever that may be, he is summoned to give his assistance in every separate case where it is needed, are of minor im-

portance compared with the point that he shall be summoned when required by the court and paid by the State, and hence be primarily independent of either side in the dispute. The tender of a fee to the expert witness by either of the contestants could then be held as equivalent to the offer of a bribe. Then might the disgraceful counter-swearing of professional men be at an end, and the white light of science fall upon judicial inquiries, unstained by the media of opposed interests.

The comparison has been happily made of the expert witness to the interpreters sometimes required to translate evidence in court. The interpreter should certainly be not in the employ of either party, but of the court, and sworn to give a true and correct interpretation of the evidence. But this is not the point of the analogy with which we are now especially concerned. The evidence may be in French or German, and interpreters are comparatively easy to find. But again, it may be in Chinese or Persian. The court learns of a man who happens to know the foreign tongue. The man is summoned from his business. Shall he be "taxed" his time and labor, and if he proves a good interpreter be summoned again and again whenever his services are needed, irrespective of his personal interest or concern in the given case? or shall he be made an employee for the time being? The interpreter of science has a harder language to translate than any human speech; and the vocabulary of his hearers into which that unknown tongue must be rendered is often a very limited one. Shall he whose task demands a higher intelligence and more patient toil than that of the common interpreter be treated less equitably? To our minds there is a very important sense in which the claim to such a man's service as a right of taxation does *not* "further the ends of justice."

A WORD FOR MILITARY DRILL IN SCHOOLS.

"It is highly probable that those parents who, through mistaken notions of education, permit their children to grow up ignorant of self-surrender, discipline, and restraint, are encouraging in them the tendencies to excess which in later life may issue in insanity. It is indeed a patent fact that the power of self-control is less cultivated at present than formerly. Our forefathers held many hard and barbarous beliefs, but there was one belief of theirs which we should have done well to retain, namely, the conviction that serious and prolonged discipline is necessary to the building up of a sound and self-sustaining manhood. In these days the last lesson imparted is that of obedience, yet it is certain that they who cannot obey will never know how to rule, and that without self-control the finest natural abilities may be worse than wasted.

"When the tendency to insanity is the effect of new ideas upon sluggish mentalities, which are confused rather than enlightened by the impact, it is probable that nothing can be done. In such cases Nature's law of the survival of the fittest must operate, and such as are incapable of improvement must perish. But with regard to the stronger natures that tend to excess because of defective training, it is not useless to speak words of warning. Nature will be avenged for violations of her laws, and those who exhaust their limited stock of vitality in youth and middle life will be denied the restful old age to which they vainly look forward. Parents who think it philosophical to withhold all discipline and training in self-control from their children will do well to reflect that, far from fitting them for an ampler manhood and womanhood by these means, they are preparing them for disaster, misfortune, and failure, and depriving them of the most indispensable defense and protection against the distracting influences of our fast and feverish modern life."

Such are the expressions of one of our leading daily papers. It is evident that the youth of to-day have a very different training from that received by the generation now passing off the stage. Our city streets show a mob of half-grown boys who are growing up without restraint at home, without the restraint of a business apprenticeship, and with an ever lessening reverence toward God and respect toward man. These are the extreme instances of the universal relaxation of discipline which is only too evident in all classes of society. The entire abolition of corporal punishment in public schools is a sign of the change in public sentiment in the matter.

The exhibitions of military drill in the higher public schools which have taken place in Boston during the past week deserve a passing notice in connection with this subject.

In this military drill is found, for a portion of the rising generation, some slight counterpoise to all this license and lack of discipline. The drill occupies but a small amount of time, it is not severe, but it does teach boys to obey, and that on the instant, and later to command. One might well question if it might not be more beneficial if it were more severe. We doubt if any officer is ever "broken" for failure to maintain proper order. To one who has experienced the severities of West Point or Annapolis the discipline must seem very lax, but, on the other hand, to one who looks with apprehension at the consequences to be feared from universal lawlessness it offers at least a little comfort.

A VERDICT OF MANSLAUGHTER AGAINST AN IRREGULAR PRACTITIONER.

The trial of "Dr." Franklin Pierce, an irregular medical practitioner of Worcester, Mass., occurred before the Superior Court in that city two weeks ago, on an indictment charging him with manslaughter in causing the death of Mrs. Mary A. Bemis, of West Boylston, in January, 1883, by the use of kerosene oil. The case excited considerable interest. The husband of the deceased testified that during his wife's illness Dr. Pierce said at various times that she had ulceration of the womb, gastro-bilious fever, typhoid fever, water

about the heart, and erysipelas. He ordered that the patient's temperature be taken every hour with an ordinary house thermometer, and that a record of her pulse be also kept, so that he could report progress of the case to a dean of some college in Boston. When he discovered the symptoms of erysipelas, one week before she died, he ordered the patient packed in kerosene oil from her neck to her toes, so as to draw out the disease. Cloths were saturated in oil, wrung out, and then laid on. She complained of intense burning pain, and the treatment was discontinued after two and a half hours. Dr. Pierce was sent for. He ordered the kerosene treatment renewed, this time by pouring oil on the cloths without removing them. This treatment was continued for thirty hours or more, when he ordered the cloths removed. It took three hours to remove the cloths, and large patches of skin came off with them. The next day Dr. Pierce presented a bill for $180 for consultation fees in Boston and $45 for surgical examinations. His services were dispensed with the following day, and other physicians called in, who said the patient was past recovery.

The testimony of the nurse showed, in addition, that after the first application of the kerosene the skin hung in strings from the patient's body. When the doctor ordered a second application he forbade the nurse to use sweet oil to allay the pain.

Dr. J. Marcus Rice, the medical examiner who conducted the autopsy, said the woman's epidermis was two thirds burned away; that the true skin was destroyed in several places, and that in some spots the muscles were exposed. He found no sign of pericardial effusion. In his judgment death was caused by the destruction of the epidermis by the use of kerosene. This opinion was confirmed by other medical testimony. One physician who had treated Mrs. Bemis testified that pulmonary troubles and chronic diarrhœa would probably have ended her life soon, and kerosene packing only hastened death. In his opinion she might have recovered from the kerosene treatment but for her vitiated condition.

The defense opened, and put on half a dozen witnesses, who, under Dr. Pierce's direction, have used kerosene in a similar manner to that in this case for erysipelas, typhoid fever, congestion, typhoid pneumonia, and other diseases. All agreed that the treatment was highly beneficial to them. The defense also offered testimony to show that the husband had administered two doses of aconite to his wife, early in her sickness, of eight drops each.

The only witness in rebuttal testified that, under the prescription of the defendant, kerosene oil had been used on her son as a remedy for lung fever until it took off the flesh and laid the bone bare.

The jury were out ten minutes, and returned a verdict of guilty.

MEDICAL NOTES.

— The following have been chosen officers of the Middlesex East District Medical Society for the ensuing year: President, Dr. John O. Dow, Reading; Vice-President, Dr. Winthrop F. Stevens, Stoneham; Secretary, Dr. George E. Putney, Reading; Treasurer and Librarian, Dr. John O. Dow, Reading; Councilors, Dr. Arthur H. Cowdrey, Stoneham, Dr. Frederic Winsor, Winchester, Dr. Seth W. Kelley, Woburn; Nominating Councilor, Dr. Winsor; Censors, Dr. Charles C. Odlin, Melrose; Dr. William S. Brown, Stoneham; Dr. Daniel March, Winchester; Dr. Julius S. Clark, Melrose; Dr. Fred. W. Graves, Woburn; Commissioner on Trials, Dr. Francis F. Brown, Reading; Reporter, Dr. George E. Putney, Reading.

— Two new prescriptions for the treatment of warts are announced in the *Wiener Med. Blätter* (November 8th). One is the application of a piece of lemon peel which has been immersed for eight days in acetic acid three or four times renewed. The slice of peel is left on the wart until it dries, which it does in about nine hours, and this is repeated four or five times. The wart is then so much loosened that it can be removed by strangulation. The second mode of treatment is to insert a pin beneath the wart, avoiding the healthy skin, and then to heat the pin's head in a spirit-lamp. This causes the wart to become white and shriveled at once, when it is easily removed without any bleeding.

— M. Pasteur and his *collaborateurs* have announced to the French Academy that they can render all dogs absolutely proof against the effects of rabies by inoculation however the virus may be administered.

— In the *British Medical Journal*, February, 1884, page 281, it is noticed that in the statistics of the Caen Hospital only four cases of stone were admitted during fifty-nine years. In one the nucleus was a foreign body; in two the patients drank wine, *not cider*, which is the ordinary beverage in Normandy. Inquiries showed that stone in the bladder is rare in countries where cider is the chief drink. M. Denis-Dumont is said to have found the diuretic properties of cider most useful in cases of gravel, obesity, and some forms of gastritis.

NEW YORK.

— At the last meeting of the County Medical Society, held May 26th, Dr. Milton Josiah Roberts read a paper on The Treatment of Ankle-Joint Disease and the Mechanism of its Cure, and presented a patient cured without deformity and without anchylosis. A resolution, offered by Dr. J. A. Irwin, was adopted urging upon Congress the necessity of suitable legislation to secure a more efficient medical service upon ocean steamships in order to prevent the needless sacrifice of human life and the introduction of foreign infection, as far as possible, into this country.

— The free public baths were opened on the 1st of June as usual. There will be eleven instead of nine this year, two of the old ones having been sold, and four new ones built at a cost of $50,000. Six of the baths are located on the East River front, one at the Battery, and four on the Hudson River front.

— Nine graduates received diplomas at the com-

mencement of the Woman's Medical College of the New York Infirmary, which was held on Thursday evening, May 29th.

— Work has now been commenced on the Vassar Brothers' Hospital at Poughkeepsie. It will consist of three principal parts, — an administrative building and a pavilion on either side, — all of which will be two stories in height with high slate roofs. They will be joined by a one-story corridor with a spacious veranda. The buildings are to stand on a bluff, facing the west, and their extreme length, from the north side of the north pavilion to the south side of the south pavilion, will be 180 feet, while the extreme depth, from the front of the administrative building to the rear of the pavilions, will be 120 feet.

— The State Board of Health has just received from one of its inspectors a report which reveals a very unsatisfactory sanitary condition among the cattle at Blissville, L. I. In the stables of one firm, which were in a terrible state of filth and offensiveness, between four hundred and five hundred animals were found housed and fed on distillery swill and hay, and one case of pleuro-pneumonia was discovered. In another stable out of forty cows three were just dying of the disease, and there were five acute cases of it beside. All had been milked that morning, and the milk distributed to customers. An almost equally large percentage of cases of pleuro-pneumonia were also found at other dairies, and there is reason to suspect that diseased cows, no longer able to furnish milk, are slaughtered and the meat smuggled into New York and Brooklyn.

Correspondence.

GRADUATING EXERCISES AT BOWDOIN MEDICAL COLLEGE. MEETING OF THE MEDICAL ALUMNI, PORTLAND, JUNE 2, 1884.

Mr. Editor, — The attendance at the Medical Department of Bowdoin College varies from year to year but slightly from one hundred, and in the term which closed on the 28th of May was ninety-nine. A gratifying circumstance in this connection is that one third of these were graduates of colleges, nine New England institutions of learning having representatives in the class. Thirty-three candidates received the doctorate in medicine. In previous years the graduating exercises have been conducted with but little ceremony, though it has been customary to have an address from some man who had attained eminence in medicine, law, or theology, but this year the class arranged a programme of a more pretentious character, and set an example which will doubtless be followed by all their successors. The address was given by the Rev. Dr. S. G. Brown, professor of mental and moral philosophy in the college, formerly the occupant of the same chair at Dartmouth, and president of Hamilton. His subject was some of the relations of the medical profession to the complicated result which we call civilization, and he handled it in a manner which displayed a critical appreciation of the aims, duties, trials, and achievements of the educated physician. The large audience which filled Memorial Hall listened to the oration with great satisfaction and approval. A valedictory address was pronounced by Mr. F. C. Heath, who had been chosen by his classmates to represent them. It was full of bright points, and was admirably delivered. The diplomas were then presented, and the class sang a very appropriate ode, which was written by Mr. C. L. Barnes. The exercises were enlivened by excellent music furnished by an orchestra of fifteen pieces.

Last January there assembled at Waterville between twenty and thirty of the graduates of the Medical School of Maine in response to an invitation of Dr. Frederick C. Thayer, of the class of 1867. Though the institution had been in existence for sixty-three years, and had educated more than thirteen hundred physicians, there had never been an association of its alumni. On this occasion, however, such a society was organized, and Dr. Thayer, the projector of the enterprise, was very properly elected as its president. A constitution was adopted by which it is provided that any person on whom a degree in medicine has been conferred by Bowdoin College may become a member of the Society by signifying his desire to this effect in writing to the secretary, and paying one dollar to the treasury, provided his character and professional standing are satisfactory to the executive committee, which consists of all the officers. The annual meeting is to be held in the week of the graduating exercises at the School. In accordance with this rule the Bowdoin Medical Alumni Association met in Memorial Hall immediately after the newly-made doctors marched out with their sheepskins. Nearly one hundred were present, and this number would have been greatly augmented but for the severe storm which lasted all day. The President briefly addressed the society, congratulating it upon the auspicious beginning of the new organization, and expressing the opinion that the alumni owed a duty to the institution which gave them professional birth, an obligation which they could discharge in various ways. One, upon which he laid great stress, was the establishment of an alumni fund, contributed by the graduates of the School, and devoted to the advancement of medical education through the medium of this institution. The suggestions of the President were referred to a committee consisting of Drs. Horr, of Lewiston, Walker, of Thomaston, and Osgood, of North Yarmouth, which reported a general approval of them, but added that the matters were of so much importance that they could not be sufficiently discussed in a short time, and recommended the appointment of a committee which should be instructed to report on the subject at the next meeting. The report was accepted, and a committee was chosen composed of Drs. Horr, of Lewiston, E. M. Fuller, of Bath, and H. H. Hunt, of Portland. A constitutional amendment was adopted by which past and present members of the Faculty of the School may be elected to honorary membership. Those who have been instructors, who are not graduates of this School, and who are still living, are Dr. William Perry, of Exeter, N. H., lecturer on theory and practice in 1837; Dr. Corydon L. Ford, of Ann Arbor, Mich., professor of anatomy and physiology from 1864 to 1870; Dr. A. B. Palmer, of Ann Arbor, professor of pathology and practice from 1870 to 1879; Dr. Thomas Dwight, of Boston, professor of anatomy from 1872 to 1876; Dr. Robert Amory, of Boston, professor of physiology from 1873 to 1875; Dr. Thomas T. Sabine, of New York, lecturer on anatomy in 1871, and on surgery in

1872; and Dr. E. W. Jenks, of Chicago, professor of obstetrics from 1872 to 1874. These were made honorary members, as also were those present professors who are not graduates of the institution. The old list of officers was reëlected. They are F. C. Thayer, of Waterville, President; S. Laughton, of Bangor, first Vice-President; R. D. Bibber, of Bath, second Vice-President; C. D. Smith, of Portland, Secretary; F. H. Gerrish, of Portland, Treasurer. The executive committee was authorized to expend at their discretion such moneys as are in the treasury. Dr. A. J. Fuller, of Bath, delivered an address, after which the Association adjourned to the large dining room, on the ground-floor of the building, where a bountiful and toothsome banquet was spread. The newly-graduated class attended as guests of the Faculty. The dinner being disposed of, speeches, in response to toasts, were made by the acting President of Bowdoin College, by Dr. I. T. Dana, the senior medical professor, by Dr. Horr, President of the Maine Medical Association, and others.

The aged Professor Packard, who is acting President, gave a most interesting account of the beginnings of the medical department, the early professors in which were his personal friends. Those who knew Nathan Smith, John Doane Wells, and Parker Cleaveland as young men are not often seen nowadays; and it was a genuine treat to listen to this venerable man as he narrated incidents in the lives of the founders of the Medical School, telling the story with a simplicity and unconscious pathos which touched every heart. Dr. Dana spoke of the work the School is accomplishing in elevating the standard of education, and of the need of larger clinical opportunities, intimating that the institution should be moved as soon as possible to Portland — an opinion which is shared by almost everybody who is familiar with the circumstances of the case. Subscriptions have been raised for the erection of an amphitheatre for the Maine General Hospital, and there is no doubt that the Medical School of Maine will change its location from Brunswick to Portland as soon as a suitable building for its accommodation is put up and deeded to the College of which it is the medical department.

The first annual meeting of the Association is unanimously considered a great success, and the next is looked forward to with the pleasantest anticipations.

There are many alumni whose addresses are not known, and all who did not receive a circular invitation to this meeting are earnestly requested to furnish the Secretary with information as to their residences at their earliest convenience.

Prof. Burt G. Wilder, who has occupied the chair of Physiology for nine years past, has resigned, and Dr. Henry H. Hunt, of Portland, has been chosen lecturer for one year in his place.

Miscellany.

PHYSIOLOGICAL ALBUMINURIA.

THE growing opinion that albumen is more frequently present in the urine than was formerly believed, receives support from a recent thesis of M. de Chateaubourg,[1] in which observations are reported conducted chiefly upon healthy soldiers and children. The tests were made by several reagents, but especially with that of Tanret (double iodide of mercury and potassium strongly acidulated with acetic acid) employed according to the method of Professor Bouchard. These means are necessary for recognizing the small amounts of albumen often found, as, for instance, from .005 to .01 gramme of albumen to a litre of urine. The general results obtained by M. de Chateaubourg show that albuminuria is frequent in healthy people. For instance, in 701 examinations made upon persons in perfect health, albumen was found in 592 cases, giving a proportion of eighty-four per cent. The cases where there was a considerable quantity, that is, more than .03 per litre, were sixty-four per cent. In 169 cases even, the amount of albumen was more than .25 per litre.

The author concludes that this physiological albuminuria is variable and modified by many casual circumstances. Thus there were individuals who one day had .25 of albumen per litre and the next day had none. It is modified among other things by bodily fatigue, which markedly increases it, as could be seen in a body of soldiers, both in the number affected and the amount per man. Brain work also increases albuminuria, as was observed in a number of young men preparing for an examination. Digestion, if accomplished during repose, has no effect on the albuminuria. But not so menstruation and the generative functions. Cold baths were found to have a marked effect. Fifty-three men having taken a five-minute bath were found to have albuminuria to a man, but in varying degree. A preliminary examination had shown that sixteen of the men had no albumen when they got out of bed. The amount in the others was increased after the bath. Most of these men had albumen the next day but in much diminished amount. It is pointed out that this influence of cold baths has an important effect. For if it be admitted, as Semmola has long taught, that the repeated transudation of albumen through the renal filter may produce alterations in the renal epithelium, it would seem that bathing should be carried on only with great caution by persons having transient albuminuria, especially if it be easily subject to exacerbations.

[1] Journal de Médicine, January, 1884.

THE FIRST DISCOVERER OF THE USEFULNESS OF KANGAROO TENDONS FOR LIGATURES.

WE trust that the name of a well-known physician of this city will not escape recognition under the disguise in which it appears in the following paragraph, which we clip from the *Australasian Medical Gazette*:

"In the *New England Medical Monthly* for June, 1883, Dr. Henry O'Marey, of Boston, is credited with the discovery that fibres of kangaroo tendons, antiseptically prepared, make the best ligatures and sutures for surgical purposes. We would call attention to the fact that Mr. T. M. Girdlestone, F. R. C. S., Eng., of Melbourne, is the surgeon who is really entitled to the credit of this discovery, and that, acting on his recommendations, these tendons have been for some seven years frequently used by him and other surgeons in Australia and England. He first exhibited tendons, prepared by himself, at a meeting of the Medical Society of Victoria, held on December 5, 1877, and called the attention of the profession to their usefulness, giving his own experience in their use."

REPORTED MORTALITY FOR THE WEEK ENDING MAY 24, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diphtheria and Croup.	Diarrhœal Diseases.	Scarlet Fever.
New York	1,340,114	648	245	17.70	14.25	4.80	3.30	2.40
Philadelphia	927,995	356	108	17.92	12.60	6.44	2.52	2 52
Brooklyn	644,526	237	90	15.12	13.86	2.94	2.94	4.20
Chicago	632,100	241	143	27.06	6.56	7.79	7.79	2.87
Boston	423,800	149	36	12.06	18 .6	5.36	—	1.34
Baltimore	408,520	134	52	21.46	15.54	2 96	4.44	5.18
St. Louis	400,000	108	33	13.80	13.80	5.46	1.82	—
Cincinnati	272,400	—	—	—	—	—	—	—
New Orleans	234,000	183	88	36 85	7.15	.55	12.10	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	73	24	16.75	5.85	5.48	—	5.48
Milwaukee	142,400	51	30	23.52	17.64	7.84	9.80	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	16	7	37 50	18.75	—	—	25.00
Nashville	54,400	12	7	25.00	33.33	—	—	—
Charleston	52,286	38	15	13.15	18.41	—	7.89	—
Lowell	71,447	24	7	16.64	24.96	8.32	—	—
Worcester	69,442	21	12	9.52	4.76	4.76	—	4.76
Fall River	62,674	13	4	7.69	15.38	—	—	—
Cambridge	60,995	—	—	—	—	—	—	—
Lawrence	45,516	14	7	28.56	14.28	14.28	—	14.28
Lynn	44,895	11	4	18.18	9.09	—	9 09	—
Springfield	38,090	12	0	—	25.00	—	—	—
Somerville	31,350	12	5	8.33	—	8.33	—	—
Holyoke	30,515	8	3	25.00	12.50	—	—	12.50
New Bedford	30,144	7	3	14.28	—	—	14.28	—
Salem	29,503	10	2	—	30.00	—	—	—
Chelsea	24,347	6	0	16.66	50.00	16.66	—	—
Taunton	22,693	2	0	50.00	—	50.00	—	—
Gloucester	21,400	7	4	—	14.28	—	—	—
Haverhill	20,905	5	0	—	20.00	—	—	—
Newton	19,421	3	0	66.66	—	—	—	—
Brockton	18,323	3	0	33.33	33.33	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	5	1	—	20.00	—	—	—
Fitchburg	13,433	—	—	—	—	—	—	—
Eighty-four Massachusetts towns	359,881	77	8	4.76	27.37	1.19	1.19	—

Deaths reported 2496 (no reports from Cincinnati, Buffalo, District of Columbia, and Providence): under five years of age, 942; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 476, consumption 343, lung diseases 287, diphtheria and croup 116, diarrhœal diseases 98, scarlet fever 63, measles 62, typhoid fever 32, malarial fevers 29, whooping-cough 20, cerebro-spinal meningitis 18, small-pox 12, erysipelas 12, puerperal fever 12, typhus fever four. From *measles*, New York 20, New Orleans 18, Chicago 10, Philadelphia five, Baltimore four, Pittsburg and Milwaukee two each, St. Louis one. From *typhoid fever*, Philadelphia 12, Chicago, Boston, and Pittsburg three each, Nashville two, New York, Brooklyn, Baltimore, St. Louis, Lowell, Lynn, Holyoke, and Waltham one each. From *malarial fevers*, New Orleans 14, New York and Brooklyn five each, Baltimore and St. Louis two each, Chicago one. From *whooping-cough*, New York 11, Brooklyn and Chicago three each, Baltimore two, New Orleans one. From *cerebro-spinal meningitis*, New York and Philadelphia four each, Chicago and New Haven two each, St. Louis, Nashville, Fall River, Newton, Brockton, and Chicopee one each. From *small-pox*, New Orleans 11, Philadelphia one. From *erysipelas*, New York three, Chicago and Boston two each, Philadelphia, Brooklyn, Baltimore, St. Louis, and Charleston one each. From *puerperal fever*, Boston three, Brooklyn and Baltimore two each, Chicago, St. Louis, Milwaukee, Charleston, and Lowell one each. From *typhus fever*, New York four.

Three cases of small-pox were reported in St. Louis (these three cases were from East St. Louis, Illinois, and taken to the hospital at St. Louis as pay patients); scarlet fever 61, diphtheria 45, typhoid fever eight, and measles four in Boston; scarlet fever 17, and diphtheria seven in Milwaukee.

In 101 cities and towns of Massachusetts, with an estimated population of 1,336,911 (estimated population of the State 1,955,104), the total death-rate for the week was 26.15 against 16.35 and 15.88 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending May 10th, the death-rate was 21.8. Deaths reported 3666: acute diseases of the respiratory organs (London) 326, whooping-cough 194, measles 176, scarlet fever 66, diarrhœa 47, fever 35, diphtheria 13, small-pox (London 19, Liverpool two, Sunderland one) 22. The death-rates ranged from 14.3 in Brighton to 28.8 in Blackburn; Bristol 18.2; Sheffield 20.5; London 20.6; Birmingham 21.4; Bradford 22.4; Birkenhead 23.5; Leeds 25.0; Nottingham 25.9; Manchester 27.0; Liverpool 27.4. In Edinburgh 23.5; Glasgow 28.7; Dublin 31.8.

For the week ending May 10th, in the Swiss towns, there were 40 deaths from consumption, typhoid fever 38, lung diseases 26, diarrhœal diseases eight, diphtheria and croup five whooping-cough four, scarlet fever one, erysipelas one. The death-rates were, at Geneva 21.4; Zurich 37.4; Basle 20.9; Berne 25.6.

The meteorological record for the week ending May 24th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
May, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 18	29.859	59	70	46	67	36	55	53	W	NW	SW	11	12	8	C	C	C	—	—
Mon., 19	29.963	66	81	50	70	41	76	62	SW	S	SW	4	17	10	C	C	C	—	—
Tues., 20	30.008	60	70	53	85	100	100	95	S	S	SW	9	10	6	O	R	G	—	—
Wed., 21	30.075	60	73	55	93	82	92	89	NW	E	SW	5	10	1	C	F	H	—	—
Thurs., 22	30.195	59	73	52	84	92	94	90	W	E	SE	2	13	6	C	H	F	—	—
Fri., 23	30.092	65	77	53	95	60	76	77	E	SW	SW	2	12	10	R	C	F	—	—
Sat., 24	29.858	72	88	59	91	50	62	68	SW	W	W	8	14	10	O	F	C	—	—
Mean, the Week.	30.007	63	77	53				76										9.20	0.87

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MAY 24, 1884, TO MAY 29, 1884.

HALL, WILLIAM R., captain and assistant surgeon. Assigned to duty at Fort Stockton, Texas. Paragraph 1, S. O. 63, headquarters Department of Texas, May 19, 1884.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING MAY 31, 1884.

ANDERSON, F., passed assistant surgeon, ordered to Navy Yard, New York.

BEYER, H. G., passed assistant surgeon, detached from Coast Survey steamer Blake, ordered to Smithsonian Institute for special duty.

RUSH, W. H., passed assistant surgeon, detached from U. S. S. Despatch, and ordered to Coast Survey steamer Blake.

HENEBERGER, L. G., passed assistant surgeon, detached from Navy Yard, New York, ordered to U. S. S. Despatch.

GRIFFITHS, S. H., passed assistant surgeon, ordered to U. S. S. Lancaster on expiration of leave of absence.

JONES, M. D., passed assistant surgeon, detached from Naval Hospital, New York, and resignation accepted, June 15, 1885.

WISE, I. C., surgeon, detached from Academy, and ordered to U. S. S. Constellation.

SUFFOLK DISTRICT MEDICAL SOCIETY. LAST MEETING OF THE SEASON. — *The Section for Clinical Medicine, Pathology, and Hygiene* will hold a special meeting at 19 Boylston Place, on Saturday, June 7th, at 7.45 o'clock. Dr. P. C. Knapp will read a paper on Observations on the Cutaneous and Tendon Reflexes. Dr. F. Minot will report Three Cases of Distended Gall-Bladder.

ROBERT T. EDES, M. D., *Chairman.*
ALBERT N. BLODGETT, M. D., *Secretary.*

NEW HAMPSHIRE MEDICAL SOCIETY. — The ninety-fourth annual meeting will convene in Union Hall, Concord, Tuesday, June 17, 1884, at eleven o'clock, A. M. The following order of proceedings is submitted by the Executive Committee: *Tuesday*, June 17, 1884. (1.) Annual Address by the President, at twelve o'clock. (2.) Essay, An Inquiry into the Causes of Insanity, with especial reference to Prevention and Treatment, Dr. Charles P. Bancroft, Concord. (3.) Oration, Aids in Obstetrics, Dr. I. G. Anthoine, Antrim. (4.) Dissertation, Mothers' Mark Delusion, Dr. M. C. Lathrop, Dover. (5.) Oration, Surgical Cleanliness, Dr. C. R. Walker, Concord. (6.) Report on Surgery, Dr. E. O. Otis, Exeter. (7.) Report on Diseases of the Eye, Dr. S. M. Dinsmoor, Keene. (8.) Essay, Treatment of Phthisis, Dr. S. C. Morrill, Concord. (9.) Respiratory Irrigation in the Treatment of Empyema, Dr. E. S. Berry, Dover. (10.) Report on Obstetrics, Dr. M. D. Danforth, Manchester. (11.) Report on Gynæcology, Dr. Ezra Mitchell, Jr., Lancaster. (12.) Report on Necrology, Dr. E. E. Graves, Boscawen: (a.) Obituary notice of the late Dr. S. M. Whipple, New London; (b.) Obituary notice of the late Dr. N. Wight, Gilmanton; (c.) Obituary notice of the late Dr. E. O. Fowler, Danvers, Mass.; (d.) Obituary notice of the late Dr. J. W. Merrill, Jr., Concord. (13) Voluntary Papers. The annual dinner will be served Tuesday, at the Eagle Hotel, at 1.30 P. M. *Wednesday*, June 18, 1884. The Society will meet at eight o'clock, A. M., and any papers or discussions laid over from the programme of Tuesday will be in order. The discussions will be reported by a stenographer for the Transactions. (1.) Report of Delegates to Dartmouth Medical College. (2.) Reports of Delegates to other Societies. (3.) Reports of District Societies, by their Secretaries. (4.) Election of Officers at nine o'clock. (5.) Treasurer's and Auditor's Reports. (6.) Miscellaneous Business. (7.) Reports of Cases in General Practice.

RECEPTION BY THE FACULTY OF THE HARVARD MEDICAL SCHOOL TO THE MEMBERS OF THE MASSACHUSETTS MEDICAL SOCIETY. — Those members of the Massachusetts Medical Society who desire to attend the reception of the Faculty of the Medical School on Tuesday, June 10th, at five P. M., will be able to obtain tickets of the Treasurer at the Institute of Technology on that day.

SUFFOLK DISTRICT MEDICAL SOCIETY, SUMMER PRACTICE. — All members of the Suffolk District Medical Society may send to Dr. Edwin H. Brigham, Medical Library, 19 Boylston Place, the days and hours on which during the months of June, July, August, and September they will be in the city to receive patients, with their addresses. After this information is collected and available a notice to the public will be given through the *Advertiser* and *Transcript*.

DR. E. W. WIGGLESWORTH,
DR. F. I. KNIGHT,
for Executive Committee.

BOSTON MEDICAL LIBRARY ASSOCIATION,
No. 19 BOYLSTON PLACE.

APPOINTMENTS. — The Board of Overseers of Harvard College, at a special meeting held May 28th, voted to concur with the President and Fellows in the following appointments: —

Robert Thaxter Edes, Jackson Professor of Clinical Medicine.

Edward Newton Whittier, M. D., Assistant Professor of Clinical Medicine.

Frank Winthrop Draper, M. D., Assistant Professor of Legal Medicine.

Dudley Allen Sargent, M. D., Assistant Professor of Physical Training and Director of the Hemenway Gymnasium (reappointment).

CORRECTION. — In the report of the meeting of the Boston Society for Medical Improvement, on May 12th, read W. F. Temple.

Original Articles.

SEROUS EFFUSIONS IN THE TYMPANUM.[1]

BY J. ORNE GREEN, M. D.

In serous effusions of the tympanum two distinct factors are thought to be the cause of the exudation, inflammation of the tympanic mucous membrane, and closure of the Eustachian tube, the former by producing a thin, serous secretion such as is common from any inflamed mucous surface, the latter by a more complicated process of suction which causes an exosmosis of the serum from the capillary blood-vessels. The conducting mechanism of the tympanum being suspended and necessarily capable of pendulum-vibrations requires that the air on each side of the drum-membrane shall be of equal density, and this equilibrium is retained through the Eustachian tube, which supplies atmospheric air. When the tube becomes closed the air within the cavity undergoes the changes common to air exposed to a vascular membrane, namely, the oxygen is absorbed by the circulating blood, and although a certain quantity of carbonic acid is given off in exchange the whole volume of air is diminished, and the result of this rarefaction is the suction which produces the exosmosis of serum. The further result of this rarefaction is a gradual sinking inwards of the drum-membrane from the over-pressure of the atmosphere, by which the tension of the membrane is abnormally increased, and its capability of vibration greatly impaired. Bezold estimates that the pressure of the atmosphere on the surface of the drum-membrane is six hundred grammes or one and one third pounds avoirdupois, but, of course, only a portion of this is over-pressure, for there is always a certain amount of air left in the tympanum. As a fact, however, it is not unusual to find the drum-membrane pressed inwards so far as actually to lie against the inner tympanic wall.

These two forms of secretion arising from these two distinct causes have been given different names, that due to the inflammation of the mucous membrane being called a serous inflammation, and that due to an exosmosis being called a hydrops ex vacuo. The dividing line between the two is, however, by no means distinct, and in the majority of cases which are seen in practice it seems impossible to determine how far each factor has been concerned in the causation of the effusion. In most cases it seems to me that both are active, sometimes one and sometimes the other predominating.

The ætiology, symptoms, and course of the disease are shown very well in the following cases.[2] When the drum-membrane is translucent the yellowish color of the serum is clearly seen, and if the liquid does not completely fill the cavity the surface of the fluid is clearly seen, like two fine hairs, running from the manubrium, anteriorly and posteriorly, to the periphery, usually in slight curves. If the surface of the liquid changes on bending the head, as it often does when very limpid, or if it varies its position after inflation, the diagnosis is confirmed. Where the drum-membrane is opaque, either from previous disease or from swelling, the history of the case and auscultation during inflation enable one to make a probable diagnosis.

The cure of the disease is effected by reopening of the Eustachian tube and by resorption of the effusion as the inflammation of the mucous membrane subsides, the opening of the tube restoring the equilibrium of the air on the two sides of the drum-membrane, and the resorption of the serum freeing the conducting mechanism, and thus restoring its vibratory power.

The risks are (1) a permanent lengthening of the fibres of the membrana tympani, leaving it in such a flaccid condition that after restoration of the permeability of the tube it is of little use for the transmission of vibrations; (2) permanent retraction of the tensor tympani muscle or adhesions between the drum-membrane and tympanic wall; (3) non-absorption of the secretion and continuance for an indefinite time of the original symptoms. Permanent retraction of the drum-membrane diminishes the size of the tympanum, and even if the existing secretion is absorbed and the parts left with good conducting power a less amount of inflammation is liable, in case of a fresh attack, to produce serious results, than if the cavity was of its full size. Many of the lighter cases undoubtedly recover of themselves and perfectly, the tube opening as the acute naso-pharyngeal inflammation passes off, and the absorption going on rapidly from that moment. But in many the amount of the secretion is so great that even after the opening of the tube and the subsidence of the inflammation nature is unable to effect resorption, at least within the time necessary to save the ear from permanent deformity. Tympanic serous effusions resemble pleuritic effusions in many particulars except that the mechanical causes at work in the tympanum are more distinctly appreciable, and mechanical methods of treatment are more directly applicable.

Politzer's inflation is sufficient in many cases to fulfill both of the indications for treatment, opening the tube temporarily by its current of air, and reducing the swelling by the pressure of the air and by separation of the walls of the tube, and favoring absorption of the secretion by scattering the serum over a larger surface of mucous membrane. Appropriate treatment to the naso-pharynx is sometimes desirable, but often unnecessary. In no class of cases is the effect of inflation so distinctly visible as in those under consideration. Where Politzer's inflation is ineffectual, recourse can be had to the catheter. Under inflation in one of these methods absorption can be effected in from one to three weeks usually, and progress can be seen in the gradual lowering of the line of serum till it finally disappears. When, however, it is evident after several inflations that no progress is being made, paracentesis will give a rapid evacuation with most excellent results, and in exceptional cases its repetition may be necessary.

The cases show very clearly the immediate improvement after inflation when the serum is scattered and the subsequent diminution in hearing as it again collects, the hearing improving more and more, and relapsing less and less till absorption is complete.

The curved lines marking the surface of the serum, and which run from the centre of the drum-membrane to its periphery, forwards and backwards, are probably due to capillary attraction, as the end of the manubrium or centre of the membrane lies nearer the inner wall of the tympanum than the other portions of the membrane do, and capillary attraction of the two sur-

[1] Read before the Boston Society for Medical Improvement, May 26, 1884.

[2] These cases are omitted for lack of space.

faces would hold the liquid at this point at a higher level than where the distance between the surfaces was greater. These curved lines are not infrequently wanting in those cases in which the drum-membrane is completely collapsed against the inner wall, as then the surfaces are equidistant throughout their whole extent, but the curves immediately appear after inflation, which restores to a greater or less degree the natural curvature of the membrane. In exceptional cases the line of the serum is a straight one directly across the membrane. In these cases the serum is so very limpid that capillary attraction of the opposing surfaces of membrane does not act upon it. This fluidity of the serum can generally be demonstrated by changing the position of the patient's head, when it will be found that the surface of the serum has also changed its position, and the patient reports that he could feel the movement in the ear. The more fluid the exudation the more rapidly the absorption takes place.

In regard to the operation of paracentesis tympani, the natural dread of the knife on the part of the patient leads me to try for absorption by inflation before resorting to operative interference, but if, after from two to four inflations, the serum still remains at the same level as at first, or if absorption ceases after progressing for a time, I advise the operation. I evacuate the cavity at one sitting by inflation and by the gentle use of Siegle's speculum, not, however, using the latter long enough to seriously increase the congestion. In the majority of cases the pain from the incision is so slight that it can be easily borne even by little children, partly due, I think, to a partial insensibility of the membrane, produced by the pressure of the fluid. Where, however, the drum-membrane is decidedly inflamed or where the serum has collected in the upper posterior quadrant, requiring an incision in that portion of the membrane, the pain is sometimes acute for a few minutes, but rapidly subsides. Immediately after evacuation the edges of the wound fall in contact, and usually unite in from twenty-four to forty-eight hours, but not so firmly that they cannot be separated by a probe on the next day if further accumulation renders another evacuation necessary.

A few inflations after evacuation are generally sufficient to fully restore the permeability of the Eustachian tube, but till this is accomplished the permanency of the cure cannot be depended upon.

In those cases in which there is little or no swelling of the tissues the relief from the operation is often immediate, the fullness and pressure in the ear, the subjective noises, the dizziness and the deafness ceasing within a few minutes; where there is much swelling of the tissues the relief is more gradual, as time is necessary for the subsidence of the swelling.

SOME OBSERVATIONS ON SOUTHERN CALIFORNIA AND COLORADO.

BY F. H. DAVENPORT, M. D.

I HAVE thought that a few words in regard to Southern California and Colorado, and my impressions of their value as health resorts, might be of interest to your readers. What I shall say will be merely the result of a few months' sojourn, and I recognize the imperfect character of such observations. But they have at least the merit of being disinterested, and as health was the object of my visit, climatic conditions were studied as carefully as the circumstances would permit. As the special aim for which the journey was undertaken, namely, to find a climate in which asthma would be relieved, was not attained, I shall at least hardly fall into the error of too enthusiastic admiration of the climate, a fault which we feel to be only too common with persons who have experienced great benefit in any health resort. Certainly if sunshine, warmth, equable temperature, very little wind, and no cold winds, slight rain-fall, and very little dampness are factors of a good climate we have one here. I personally know of no climate that equals it in these respects, unless it be Upper Egypt during a few months in winter, and that has little else but climate to recommend it. One cannot live there the year round, and it is at present merely the goal of a winter's excursion.

Let me speak a little more in detail as to these several points, and my remarks will have reference more particularly to Santa Barbara, as the greater part of the winter was spent there. The sunshine is a marvel and a delight. During the greater part of the year one can be almost as sure that the sun will shine as that it will rise; and week after week of the most charming Indian summer weather is the rule.

As regards the temperature, there is no cold weather. Hoar frost is occasionally seen, but delicate flowers bloom in the open air the year round. Snow is exceptionally seen for a few hours on the tops of the neighboring mountains, but it never snows in the valleys. The temperature in winter ranges on an average from 40° to 50° Fahrenheit in the morning, 55° F. to 70° F. at noon, and 50° F. to 60° F. in the evening. In summer these figures would be a little higher, but very hot days, with a temperature of 85° F. or over, are exceptional. The equability of the temperature is to my mind the most favorable element of this climate. The diurnal variation is very small, a most important factor in estimating the value of a health resort. The changes through the day are slight, and never sudden. There is no marked chill at nightfall, and if invalids should chance to be caught out at sundown it is not so serious a matter as at many invalid resorts of much wider fame. I am speaking particularly of Santa Barbara. In the neighborhood of Los Angeles, and in general back from the sea-coast among the foot-hills and mountains, there is a cold wave at night which must be trying to delicate persons. Santa Barbara is exceptionally well situated. The sea-coast line runs from northwest to southeast, and the prevailing south to southwest winds come in cool from the broad Pacific. The colder winds of the north and east are shut off by the range of mountains some twenty-five hundred feet high, which half encircle the broad belt of gently rising ground on which Santa Barbara is situated.

There is very little wind, as a rule. For instance, during the months of December and January there was every day a gentle breeze, just enough to ruffle the surface of the water, and only once sufficient to make white-caps. What little wind there is is never chilly, and though an occasional windy and dusty day occurs yet it is so much of an exception that it never need be taken into consideration in sending a patient thither.

I found, before going to California, that there was a great deal of misconception about the so-called "rainy

season." The expression naturally calls up to mind a series of months when rain falls pretty constantly, interfering with out-of-door exercise, causing mud and dampness, and a generally uncomfortable state of affairs. Such is by no means the case. Rain may occur from November to May, but there is usually very little except in January, February, and March, and even then an occasional rainy day, or a shower in the night, followed by bright sunshine, is the rule. As the whole rain-fall, which averages about fifteen inches, is distributed through five or six months, the amount of unpleasant weather is very small, not enough to interfere with the comfort of the most delicate patient. There is an occasional wet season when the greater part of the rain-fall occurs in one or two months, and rivers overflow their banks, travel is interrupted, and the roads become almost impassable from mud. Such has been the winter just passed, there having been the greatest rain-fall for over twenty years. In February a great deal of rain fell, more than eighteen inches in the course of three weeks; but with the exception of annoyance from delayed mails and interrupted communication it was not serious. Invalids did not seem to suffer from it, and for two reasons: first, it was not a cold rain; and, second, when the sun shone out again the roads dried rapidly in the town and its immediate neighborhood, and wonted carriage or horseback exercise could be resumed.

Two other sources of dampness are dew and fog. There is a very moderate dew-fall, and what there is seems to be precipitated in the early morning, and at sundown and in the evening there is no marked dampness. What falls in the night is so quickly dried by the sun as to cause no inconvenience whatever. Fogs occasionally occur, but are not disagreeable. They are warm and soothing, as there is a decided absence of that raw and chilly element which makes them so undesirable on our coast.

We have here a climate which would seem to possess very few serious disadvantages, and where we should expect patients with affections which need a mild, equable, and moderately dry climate to improve. Of such affections lung troubles form by far the largest contingent, and in the majority of cases they justify the reputation of the climate. More time than has yet been devoted to the subject, larger experience, and more accurate observation are needed before we can define with precision exactly what forms of pulmonary disease are most benefited by this climate. With regard to phthisis, I should select Southern California in preference to other health resorts for cases which were not predisposed to hæmorrhage, where the consolidated portion of lung tissue showed a tendency to break down, and even in cases of cavity formation, especially if there were very free secretion. The strength of the patient is an important factor in deciding. Where the strength has become markedly reduced, and there is so much prostration that exercise is impossible, I should choose California rather than Colorado, for instance. The climate is so mild as to make an out-of-door life possible for the most delicate invalid, and only as the patient gained strength would a greater elevation and a more stimulating air be advisable.

Chronic bronchitis, especially of the dry form, where there is some emphysema, and the heart has difficulty in doing its work, is one of the diseases most likely to be helped. So, too, chronic throat affections, pharyngitis, and laryngitis, and catarrh in its various aspects. Many asthmatics find that they are better in Southern California, but generally experience more relief at points of greater elevation than Santa Barbara.

While California will always be a favorite health resort for consumptives, and increasingly so as it becomes better known, and travel becomes easier, yet I am sure that nervous debility will claim it more and more for itself. I know of no climate better fitted for the broken-down man of business, or the nervous invalid, to whom the slightest household care is a burden. There is something so seductive in the air and sunshine and warmth that one is perfectly contented to do nothing but breathe and enjoy nature. The universal testimony of those who have lived there a series of years is that ambition is forgotten, energy is lost, and one gets into such a placidly tranquil state of mind (demoralized we should call it) that nothing worries or disturbs, and life is not a problem to be solved, but a *dolce far niente* existence to be enjoyed.

Neuralgic affections are especially helped in this climate, while rheumatism would be rather a contra-indication.

The choice of a climate is in most cases a matter of intelligent experimentation, and experience shows that cases which for a time are benefited on the sea-coast yet now and then need a change inland. There is within easy access of Santa Barbara a health resort which combines most of the advantages of that place with greater elevation and consequently more bracing air. This is the Ojai Valley, which has a deservedly growing reputation. It is fifteen hundred to two thousand feet above the sea-level, cut off from winds, and possessing a very pure air.

Santa Barbara and the Ojai Valley together possess nearly all the requisites of a thoroughly good climate.

By all means advise patients to consult some local practitioner. There are many minor points which only such knowledge as comes from residence in a place will suggest, which, though small, are by no means unimportant.

I propose to say but little of Santa Barbara in other respects. A few practical hints, however, as to accommodations, cost of living, and other incidental expenses may not be out of place. One has a choice of three modes of living, — in a hotel, in a boarding-house, or keeping house. Hotel life involves the least care, but is the most expensive. Santa Barbara has two good hotels, one of which, the Arlington, is the best in Southern California. By the month the expense is from two dollars and a half to three dollars a day, and the accommodations and table are thoroughly good. I should consider the freedom from the cares of housekeeping, the pleasant social element which may be cultivated or not as the person chooses, and the independence which one could not have in a small boarding-house, as elements particularly favorable for most invalids.

There are several very good boarding-houses in Santa Barbara, where the expenses are about two thirds what they would be in the hotel. They are very small, however, being merely dwelling-houses, with at most three or four rooms for guests, and unless a party of friends could take the whole house there might be a great deal of annoyance on the part of invalids from noise, and on the part of well people from the constant sight of some poor invalid, or the

hearing an incessant cough. The table at several of the boarding-houses is said to be very good.

Housekeeping, with the one exception of servants, is said to be very easy. Cottages to rent for the season are very numerous, and many of them exceedingly attractive. Good furnished cottages can be had for from thirty dollars to sixty dollars a month, unfurnished for from twenty dollars to thirty dollars. An occasional open fire at morning and night is all that is needed in the way of heating. Provisions would average about the same as in the East, meats and vegetables being cheaper, and some groceries dearer. Chinese servants are almost exclusively employed, and their wages range higher than servants' wages here.

Good saddle-horses can be bought for from fifty dollars to one hundred dollars. They can be hired by the month for twenty-five dollars, or a horse and buggy for forty dollars, and for a short stay that is decidedly the best arrangement.

For any one who contemplated staying more than six months I should by all means recommend hiring a house as, on the whole, the most satisfactory way to live. For persons who are well enough to go out without regard to the weather a modification of housekeeping may be tried by renting a house near one of the hotels or boarding-houses, and taking meals at the latter. In that way more quiet is secured than in the hotel, and the bugbear of servants is avoided.

There are good educational advantages in Santa Barbara, very agreeable society, a pleasant club, and churches of all denominations. There are a great many more physicians than can make a living, most of them obliged to live there on account of their health. Zymotic diseases are very rare, and the severe diarrhœal diseases of children are almost unknown. Children do remarkably well, as they rarely take cold, and can be out of doors at play almost every day of the year. Taking it all in all, while there are many disadvantages in an enforced residence in Southern California there are a great many compensations.

I spent a few weeks in Colorado Springs on my return, and was interested to compare the two climates, so radically different, and yet both advancing such strong claims as health resorts for consumptives. In both places I found profound distrust of the other, and in Colorado Springs it was the opinion that it was almost sure death for a consumptive to go from there to California. Several cases in point were cited, and I myself should consider it much the safer course to go from California to Colorado than the reverse. From the stimulating air of Colorado the let-down is too sudden.

Colorado does not impress a stranger as a remarkably good climate. It is very changeable, windy, and at times intensely cold or hot, and has a markedly stimulating effect on the whole nervous system. But facts speak louder than theories, and the facts are that consumptives, many of them with but fractions of lungs in working order, improve and live a comfortable life. The explanation seems to me to be the dryness and pureness of the air. Certainly if with so changeable a climate there were dampness, such good results as we find would be impossible. One result of the changeability of the climate is that part of almost every day is warm and pleasant enough for invalids to be out. The sun's rays are very powerful, and even with the thermometer at zero it is warm in the sun.

One would suppose that the effect of an altitude of over five thousand feet on the circulation, quickening and stimulating it, would be to favor hæmoptysis, but such is not the case. The hæmorrhagic cases do well, as a rule, and a primary hæmorrhage occurring in Colorado is an exception. The cases where there is consolidation without cavity formation do best, and in many instances areas of dullness diminish and clear up with astonishing rapidity. Cases farther advanced, where there is already breaking down of lung tissue, do not do as well, and when a change of climate seems advisable in such cases I should choose California rather than Colorado.

The claims of both these great sections should not be ignored. It is absurd to send all patients to one or the other. There are cases which will do better in Southern California than anywhere else, just as there are cases which need the dryness of air and elevation of Colorado. To determine which place will suit the given case requires most careful study. The temperament and habits of the patient, extent and rate of progress of the disease, ability or not to take exercise, state of the mucous membranes of the air-passages, and a great many other points, should be carefully considered. Only as that is done can the best results be expected from a change of climate.

I heard a great deal said about the climate of New Mexico and Arizona, but only passed through these territories en route for California, so cannot speak from personal experience of their value. I only know that the air seemed to us to have an exceptionally pure and bracing quality, different from any other part of our journey. It seemed to allay all irritation of the mucous membranes, and it was a delight to breathe it. I think these territories have a great future before them as health resorts. There is a table-land which stretches on the eastern side of the Rocky Mountains even down through Mexico, at a varying altitude of from four thousand to seven thousand feet, which has virtually the same climatic conditions, and I feel sure that places will be found which will unite the advantages of Colorado health resorts with a less rigorous winter climate.

RECENT PROGRESS IN OPHTHALMOLOGY.

BY O. F. WADSWORTH, M. D.

THE JEQUIRITY QUESTION.

THE enthusiastic announcement by De Wecker, nearly two years ago, of the merits of infusion of jequirity in the treatment of trachoma has been followed by the publication of numerous articles on the subject. Our readers will remember a paper in this journal by Dr. Standish, one of the earliest on the subject published in this country, giving a detailed account of the results of this treatment in a series of cases. The success attained was a very gratifying one in view of the generally obstinate nature of the affection and its great tendency to relapses. But it appeared there that the claim made by De Wecker of the innocuousness of the remedy as to ulceration of the cornea was not altogether justified. Still stronger instances of serious implication of the cornea from the use of the drug have been presented by others. The general verdict, however, has been that the new remedy is of much value when employed with caution and in properly selected cases. Precisely what is the range of disease in which jequirity may be safely used cannot yet be

regarded as settled. It would seem at present that its application should be much more narrowly restricted than De Wecker proposed in his early communications, and that unless there be a pannus of the cornea it is more likely to be injurious than beneficial.

In a recent paper De Wecker [1] gives the conclusions drawn from a very extended experience of the method. He thinks it important that the infusion should be used when fresh, as an unpleasant odor is developed after a few days, and when old it is not so reliable in its action. A three per cent. infusion is generally employed; a five per cent. in cases of dry degenerated conjunctiva only. The infusion is applied but once, being thoroughly rubbed on the conjunctiva of the inverted lids and fornix by means of a sponge dipped in it, but with avoidance of the cornea. In most cases a single such application is sufficient to produce a violent ophthalmia, and if the trachoma is not cured a second and a third application is made at an interval of at least two or three weeks. The dangers of jequirity ophthalmia are two: the employment of strong infusions in too rapid succession, and application to a conjunctiva already discharging. With pannus of the cornea this writer asserts that an intense inflammation excited by a single application brings no danger to the cornea, but an undue increase of a beginning ophthalmia by farther use of the drug or its continuance when there is already a purulent discharge does endanger the cornea, for there is then produced not the specific jequirity ophthalmia, but an increase of the preëxisting purulent conjunctivitis. The remedy should not, therefore, be used when there are suspicions of chronic purulent ophthalmia, but only in cases in which the granulations are dry. If the cornea is intact treatment with jequirity is rather harmful than beneficial, for such cases greatly resemble chronic purulent conjunctivitis with marked papillary hypertrophy. The few cases which have been observed in which the inflammation extended by inoculation to the other eye are to be explained by the production of purulent ophthalmia in a conjunctiva unsuitable for the treatment, true jequirity ophthalmia not being so transmissible.

The efficiency of jequirity in simple and ulcerous pannus De Wecker considers established without doubt. He also claims that, according to his observations, its use is attended with no danger in parenchymatous keratitis and chronic infiltration of the cornea, which clear up with more or less certainty and to a greater extent than has ever been attained with syndectomy. He quotes one of his assistants, who had experimented on three hundred patients, that torpid central corneal ulcers, especially those due to cicatricial keratitis and torpid scrofulous pannus, with or without ulcers, may successfully be subjected to this treatment. In these diseases, however, the swelling of the conjunctiva and the amount of purulent secretion must be considered in determining whether jequirity should be used.

The experience of others with jequirity has not always been so rose-colored. Several oculists gave the results of their employment of jequirity in the journal in which the above paper appeared. From consideration of these and other publications it appears that the susceptibility of individuals to the action of the remedy is by no means uniform. The pain induced by the application is often very great; sometimes severe rigor, fever, and prostration have been caused. There have been glandular enlargements in some cases. Not only ulceration but perforation of the cornea has occurred in several instances, even when there was pannus of the upper half, at least, of the cornea, and a weaker solution than that last advised by De Wecker was used, though the treatment was not always confined to a single application. Knapp [2] reports a case of ordinary trachomatous pannus, no discharge, no corneal ulcers, in which a single brushing of a fresh three per cent. solution, macerated three hours, over the everted upper lid was followed by a most intense reaction; membranes marked, and when, three days later, they were cast off, a most violent pyorrhœa followed, which, in two days, affected the other (not inoculated) eye; extensive central perforating ulcers in both corneæ. Severe dacryocystitis has also been observed.

In acute trachoma with clear cornea jequirity has often aggravated the inflammation, sometimes has cured the granulations with the formation of dense cicatrices. In chronic trachoma with vascular and secreting conjunctiva the condition is usually made worse. In chronic trachoma with more or less cicatrized conjunctiva, without secretion and with pannus, the result from jequirity is often brilliant, at least so far as the pannus is concerned, and more rapid than by any other method of treatment. But even here, although the pannus clear up, granulations of the lids, if present, often persist, and while relapse of pannus seems to be very much less frequent than after other methods it is not unknown. Danger to the cornea, other things being equal, is inversely as the amount of pannus.

The widespread acceptation that the germ theory of disease has acquired at the present day made it natural that its aid should be invoked to explain the inflammation excited by jequirity. De Wecker early suggested that a vegetable ferment was the active agent concerned. Sattler [3] undertook an extended series of experiments on man and rabbits to determine the nature of this agent. He described a period of incubation of some three hours between the application of the infusion to the conjunctiva and the first appearance of subjective and objective symptoms, and considered the whole course of the inflammation to bear a strong resemblance to that of an infectious disease.

Attempts were made to discover some chemical substance in the infusion which would produce the inflammation, without success. There was found invariably, however, in the fluid, sometimes immediately after filtration, usually only some hours later, a definite variety of bacillus, which rapidly increased in numbers and soon began to collect at the surface and to produce spores. The film thus formed sank after some weeks, and the fluid gradually became clear. It was in accord with these changes that the activity of the infusion was found to be greater at first, but after a time to be wholly lost. The same bacillus was found in small quantity in the purulent secretion of the conjunctiva and in the membranous exudation, and the scanty presence of the bacillus here was regarded as explaining the circumstance that the secretion of jequirity ophthalmia, applied even repeatedly to the healthy conjunctiva, excited but a mild degree of conjunctivitis. The bacillus was also found in the infiltrated conjunctival and subconjunctival tissue.

Endeavors were made to obtain an infusion free

[1] Archives of Ophthalmology, xiii., 1.

[2] Loc. cit.

[3] Klinische Monatsblätter für Augenheilk., June, 1883.

from bacilli. Boiling for half an hour to an hour invariably made the infusion wholly ineffective. This procedure, however, also precipitated the albumen naturally present in considerable amount, and when the fluid was separated from the precipitate by filtration and exposed to the air only a feeble generation of the bacillus took place. Addition of bichloride of mercury to the jequirity infusion in the proportion of one to 10,000 stopped the development of bacilli; but the infusion still excited a severe ophthalmia. Here the discovery of spores floating in the fluid and capable of development when transferred to a suitable material was regarded as accounting for the ophthalmia.

Stronger solutions of sublimate destroyed the germs. Thymol (one to 2000) did not prevent the development of spores or of inflammation.

By careful observation of precautions against the admission of germs Sattler succeeded in preserving for weeks, in a flask stopped with cotton wool, an infusion wholly free from germs. Nevertheless, when this infusion was carefully dropped upon the conjunctiva it excited a marked ophthalmia. This result Sattler readily explained by the supposition that it must have been difficult to prevent germs free in the air from reaching the conjunctiva during and after the application.

Finally, pure cultures of the bacillus were made. The cultivated bacillus placed in the conjunctival sac caused a conjunctivitis. After a single application the conjunctivitis was mild, and in twenty-four hours only slight traces of it remained. A number of applications at intervals of one or two hours excited the characteristic diphtheritic exudation in the fornix conjunctivæ, and the inflammation continued several days. Sattler considered it proven that the ophthalmia was caused by the bacillus in question. This bacillus, however, was not originally in the jequirity pea, but one whose germs were very generally present in the air. Under ordinary circumstances innocuous, when transplanted to a suitable soil (jequirity infusion) it developed a pronounced malignancy. He admitted that a bacillus of similar appearance and like behavior on cultivation was to be found in infusion of ordinary peas, but claimed that the conjunctivitis caused by pea infusion containing the bacillus was very mild.

Two years earlier Sattler[1] had described a micrococcus in the granules of trachoma, which he believed to be the cause of the disease. Now, in view of the curative action of jequirity in trachoma, he considered that, just as the new bacillus in jequirity infusion prevents the development of all other germs that may be present there, so in the trachomatous conjunctiva it modifies the condition of the tissues in such a manner as to deprive the micrococcus which has produced the trachoma of its means of existence.

Sattler's position did not remain long uncontroverted. Hippel[2] came to very different conclusions. He also experimented on man and rabbits. He denies the analogy with infections, asserting that there is no period of incubation, and that if the disease were infectious it should be easily capable of propagation by the secretions. His attempts to prevent the development of the bacillus by solutions of sublimate, even as strong as one to 5000, were unsuccessful. Yet he points out that he was able to produce in the rabbit by solution of sublimate alone (one to 6000) a violent conjunctivitis, with diphtheritic infiltration, necrosis of conjunctiva, and destruction of the eye. Regarding the possibility that sublimate might, by chemical action, not by its antiseptic properties, prevent the effect of jequirity, he used one half to two per cent. carbolic acid, one third to one sixth per cent. salicylic acid, and four per cent. boracic acid solutions. With all he was able to preserve the infusions for months free from bacilli, and although there were particles in the fluids which might have passed for spores, careful attempts at cultivation of these wholly failed. Yet the infusions, even when three or four months old, excited the same violent ophthalmia as did fresh watery preparations swarming with bacilli. Hippel found in infusions both of hay and peas a bacillus strongly resembling that of jequirity, and was able by repeated applications of these to produce in rabbits severe conjunctivitis, with adherent gray exudation in the fold of transmission, and secondary affection of the cornea. Farther, an oily substance with strong odor of jequirity was prepared by Gähtgens by treatment with ether. This, used in the form of a neutral emulsion, caused in two rabbits a thoroughly characteristic ophthalmia, with the single difference that the inflammation developed more slowly. The experiments were too few, however, to determine if this really contained the active principle of the drug.

Still more recently Neisser,[3] in Breslau, Klein,[4] in London, and Salomonsen,[5] in Copenhagen, have published the results of experiments undertaken to determine the influence of Sattler's bacillus in causing the jequirity ophthalmia. Neisser and Salomonsen agree that there is a so-called period of incubation, but without giving it the significance Sattler attached to it. All confirm the observation of Sattler that a sterile infusion possesses full virulency, and concur in the statement that the bacillus is not the active agent.

Neisser and Salomonsen even assert that, instead of the bacillus causing the inflammation, it is this which after a time destroys the potency of the jequirity, while, on the other hand, the activity of the infusion is preserved so long as it is kept free from germs. All were unable to find the bacillus in the secretions, or in cultures made by inoculating suitable soils with the pus and membranes. Boiling, or, according to Neisser, even long standing at a temperature of 38° C. to 39° C., destroyed the efficacy of the drug. Finally, Klein, having sterilized infusions by boiling, inoculated them with bacilli and spores from another preparation, and when after twenty-four hours they were swarming with bacilli found their application to the conjunctiva entirely ineffective.

[1] See this journal, vol. cvi., p. 517.
[2] Archiv für Ophthalmologie, xxix., 4.
[3] Centralblatt für pract. Augenheilkunde, February, 1884.
[4] Centralblatt für die med. Wissenschaften, No. 8, 1884.
[5] Centralblatt für pract. Augenheilkunde, March, 1884.

— The following elephantine dose was recently administered by the attendant veterinary to one of Barnum's secular elephants, "Allah," which was attacked with enteritis while in Cincinnati: Lard, eight pounds; linseed oil, one gallon; tincture of opium, one pint; spirits of nitrous ether, one pint; syrup, one quart. The lard and oil were first mixed, then the other ingredients added. The trunk was raised above the head and the mixture poured down the throat through a large metal tube. His elephancy recovered.

Reports of Societies.

THE ANNUAL MEETING OF THE PENNSYLVANIA STATE MEDICAL SOCIETY, MAY 14, 15, AND 16, 1884.[1]

THIRD DAY'S PROCEEDINGS.

PROFESSOR LEIDY, President of the Anatomical Board of the State (appointed under the law recently adopted to protect dissection by the distribution of cadavers from various public institutions throughout the State to the colleges), addressed the Society, and requested the coöperation of the medical profession of Pennsylvania in seeing the law faithfully and fairly executed.

DR. N. S. LITTLE read the address in Ophthalmology, in which he discussed the value of pupillary symptoms in general disease, based upon the records of 1000 cases.

DR. EDWARD JACKSON, of Chester County, in a brief communication called attention to the danger of Poisoning by Mydriatics, and referred to a number of fatal cases.

A FORM OF EPITHELIAL MYCOSIS FROM A CLINICAL STAND-POINT

was considered in a paper by DR. ALBERT G. HEYL, in which he discussed the relations of micro-organisms to certain diseased states, and directed especial attention to forms of bacterial infection observed in the eye, not always limited to the conjunctival epithelium, but seen in other localities. This affection is almost always fatal.

AN ELECTRIC LARYNGOSCOPE

was shown by DR. CARL SEILER, which consisted in a small arc-lamp fixed in front of the mirror on the forehead of the observer. It was operated by a storage battery.

DR. J. SOLIS COHEN exhibited Trouvé's polyscope for examining the larynx, and for rhinoscopy.

In a communication entitled Does Chronic Discharge from the Ear make Life Insurance Hazardous? DR. CHARLES L. TURNBULL answered the query in the affirmative, after considering the reports of a number of cases.

DR. PETER D. KEYSER in a conclusion of the paper read at a former meeting, on Some Ophthalmological Observations during Ten Years' Service in Wills' Eye Hospital, gave a number of clinical histories of cases of affections of the choroid, retina, optic nerve, recti muscles, sclerotis, vitreous, etc., with some anomalies of refraction.

THE ADDRESS IN SURGERY

was delivered by DR. JOHN B. ROBERTS, of Philadelphia, who exposed some "surgical delusions" with regard to the safety of chloroform anæsthesia; the value of styptics, dangers of trephining the skull, necessary fatality of heart wounds, lateral symmetry of normal limbs in the same individual, and one or two other points of interest.

DR. E. T. BRUEN read a paper upon the

OPERATIVE TREATMENT OF PURULENT PLEURAL EFFUSIONS,

written in conjunction with Dr. J. Wm. White, in which he detailed the indications for the operation; gave a résumé of thirteen cases in which it had been performed, with the report of an original case in which a section of three ribs was removed with good results.

DR. C. B. NANCREDE, in a paper on

THE BICHLORIDE OF MERCURY AS A SURGICAL DRESSING,

spoke enthusiastically in its praise, and reported cases of amputation of breast and other major operations which healed without a drop of pus.

PUBLICATION OF PAPERS AND ABSTRACTS.

Upon reassembling in the afternoon the report of the Committee upon Publication of papers and abstracts was presented as follows:—

"All the papers read or appointed to be read before this Society become thereby the exclusive property of the Society, and the author has no right to publish or cause to be published the paper or any part of the same without the consent of this Society. The Committee on Publication shall not be at liberty to publish any paper that has been published in violation of the above requirements.

"*Resolved*, That the Medical Society of the State of Pennsylvania look with great disfavor upon the making use of this organization as an advertising medium, and hold such practice as contemptible as a flagrant violation of the spirit of the Code of Medical Ethics."

This was adopted with the amendment that the Society reserved the right to furnish abstracts or to permit them to be furnished for publication.

DR. DE FORREST WILLARD read an excellent paper upon

NON-NECESSITY OF TARSOTOMY IN TALIPES OF CHILDREN,

and presented cases showing the value of manipulation and stretching with proper apparatus. He exhibited a form of apparatus in which a shoe on the affected foot was attached to a belt around the pelvis by a vertical, lateral steel rod, jointed opposite the knee and thigh, in connection with which was a long spiral spring, which by a constant action everted the toes. Cases were shown and photographs passed around to prove that tarsotomy is not needed in children even when the deformity is great.

DR. A. SYDNEY ROBERTS exhibited several cases illustrating the application of a new form of splint to the treatment of Chronic Articular Osteitis of the Knee-Joint, and DR. W. S. JANNEY exhibited a case of deflection of the trachea, in which the presence of a large tumor of the neck had required the performance of tracheotomy.

REPORTS, RESOLVES, AND ANNOUNCEMENTS.

A favorable report on the plan submitted during the first day to found a society to organize a State Board of Health, and to help educate the community in medical matters and the principles of health was adopted without debate.

Resolutions paying tributes to the memory of the late Professor Gross, and proposing the erection of a monument to him in Fairmount Park, were unanimously approved.

The time for the next meeting, at Scranton, was changed from May 2, 1885, to the last Wednesday in May, on account of the proximity of the former date

[1] Continued from page 535.

to the time of the meeting of the American Medical Association in New Orleans.

The announcements for the regular addresses in next year's session were made as follows: In surgery, Dr. E. A. Wood, of Pittsburg; in obstetrics, Dr. C. A. Rahter, of Harrisburg; in hygiene, Dr. J. G. Richardson, of Philadelphia; in mental diseases, Dr. S. S. Schultz, of Danville; in otology, Dr. C. S. Turnbull, of Philadelphia.

Just previous to the adjournment *sine die* the new President, DR. E. J. ALLEN, was introduced by the ex-president, who made some valedictory remarks, and welcomed his successor, to which Dr. Allen responded in a few words, thanking the Society for the honor conferred. The Association then adjourned.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

MAY 26, 1884. The President, DR. CHARLES D. HOMANS, in the chair.

SPECIMEN ILLUSTRATING PROGRESSIVE MOVEMENT OF DERMOID LINING OF EXTERNAL AUDITORY CANAL.

DR. F. H. HOOPER showed a specimen which had been removed from the ear, and which came away sticking to a ceruminal plug. The specimen represented the dermoid coat of the membrana tympani and of a portion of the external auditory canal. When first syringed out it was rolled up into a compact mass, but on being placed in water it unravelled to its present length, which is four inches and a half. Its width is half an inch. The specimen illustrated very well the progressive movement from within outward of the dermoid lining of the external auditory canal and of the outer coat of the membrana tympani. This movement has long been recognized, and even the direction with which it takes place has been demonstrated by Dr. C. J. Blake's ingenious observations on the subject. In this instance the epidermis in its outward movement, meeting with the resisting plug of cerumen, gradually folded up on itself (like the sides of an accordion when the instrument is closed); which explains how a mass of this length could be accommodated in the small portion of the meatus between the ceruminal plug and the drum-membrane.

DR. J. ORNE GREEN said the specimen shown was an unusually large and perfect one. In regard to the mode of formation of these collections it would be interesting to know whether the roll lay across or lengthwise of the meatus, and he was not aware that this fact had been as yet noted; if the explanation given was the correct one, we should expect it to lie across. For himself he was unable to accept the undoubted outward growth of the dermoid layer of the drum-membrane as explanatory of all or even of the majority of these epidermal collections in the meatus; for such were often found on a circumscribed portion of the walls of the passage only, even in the extreme outer portions, all other parts of the walls and of the drum-membrane being healthy. He was rather inclined to refer them to what has been called "desquamative inflammation," which leads to large collections of epidermis, sometimes in the tympanum proper, sometimes in the mastoid cells, and not infrequently in other parts of the body, as the vagina. It might be that further investigation would show that collections like the one under discussion, consisting of a distinct roll of epidermis, were influenced to take the form of a roll by the dermoid movement, but even in these cases it seemed to him we must assume a pathological process to account for the enormous epithelial development.

DR. HOOPER, in answer to a question by Dr. Minot, said that the patient complained of deafness. Both ears were full of cerumen, and this compact mass was syringed out. The drum was much injected, yet there had been no history of inflammation. Hearing is now perfect.

LINKS OF ARTICULATED CATHETER REMOVED FROM THE BLADDER.

DR. J. COLLINS WARREN showed several links of an articulated metallic catheter, which had broken off in the bladder when passed by the patient, an accident which has happened several times. They had been retained some six months, and he used the lithotrite, expecting to break up incrustations and separate by evacuation. At the first introduction several pieces of catheter were caught and brought away. Others were washed out, and on using the lithotrite again it became locked, and would not easily open. By means of incising the meatus, a link which formed a barb with the jaws of the instrument was withdrawn. There proved to be little or no incrustation.

DR. R. H. FITZ read a paper on

THE IMPORTANCE OF PERSISTENT OMPHALO-MESENTERIC REMAINS AS A CAUSE OF INTESTINAL OBSTRUCTION.

The report of the discussion on this paper is delayed by request of Dr. Fitz.

DR. J. ORNE GREEN read a paper on

SEROUS EFFUSIONS IN THE TYMPANUM.[1]

Dr. Green said in answer to Dr. C. J. Blake that he thought paratencesis was indicated in a case of effusion without congestion, provided it were not absorbed by inflation.

DR. C. J. BLAKE said that among the causes for hydrops tympani were closure of the Eustachian tube, which commonly includes some congestion; the presence of nasal polypi, when the condition can be removed by the removal of the polypus; and reflexes affecting the vaso-motor nerves of the part. He mentioned a case of exposure to cold during a drive, which was followed in two hours by great pain, with swelling and bulging of the upper part of the tympanum, which was transparent with effusion, although there was no liquid in the middle ear. The condition, if not relieved, would grow worse. Inflation was impossible, and paracentesis caused the collapse of the bulged membrane with a sharp hiss of escaping air. An hour later there was a free serous discharge. He asked the reader if he is ever obliged in these cases to use the Eustachian bougie.

DR. GREEN said that he thinks either Politzer's inflation or the catheter can commonly be used in this condition. He would not, however, hesitate to use the bougie if they failed, and he does use it in other forms.

[1] See page 553 of this number of the JOURNAL.

Dr. S. W. Langmaid expressed his opinion that most people are unable to have the nostrils long occluded without risk of effusion in the ear, and that the risk is increased if there is at the same time a pharyngeal stenosis, from whatever cause.

Dr. Green said that he had not intended to go into anything but the common forms, and he wished to dwell particularly on the diagnosis and treatment.

Dr. G. K. Sabine asked if there is any value in the common practice of inflating the ear by blowing against the fingers.

Dr. Green thought it would only be possible in simple cases. It is partial, and it may do harm by causing congestion of the whole head, while from the frequency with which the patient is tempted to use it there is danger of stretching the drum.

PERCEPTION OF MUSICAL NOTES IN ANIMALS.

Dr. C. J. Blake showed a whistle invented by Francis Dalton in which the pitch is regulated by a screw. By the use of this it is found that small dogs appreciate a higher pitch than large ones. Experiments are now in process on cats.

ESSEX NORTH DISTRICT MEDICAL SOCIETY.

H. F. Adams, M. D., Corresponding Secretary, Reporter.

The regular annual meeting of the Essex North District Medical Society was held at the Eagle House, Haverhill, March 7, 1884, Dr. J. A. Douglass, of Amesbury, President, in the chair.

The annual address was by Dr. E. P. Hurd, of Newburyport, Vice-President of the Society; subject

CEREBRAL LOCALIZATIONS.

The following is a synopsis: The essayist divided his topic into four heads: First, the general physiology of the cerebrum; second, regional physiology; third, psychical evolution and cortical centres; fourth, the explanation.

Under the first head, he said, there was general agreement that the hemispheres were the seat of the intellectual operations and of volition, as proved by mutilations in animals (removal of parts or the whole of the cerebrum) and the effects of disease in man (atrophy, inflammation, œdema, etc.). Grave lesions of the encephalon, whether morbid or experimental, are always attended with enfeeblement or disappearance of the psychical faculties, and it is a fact, too, that motility also suffers in a marked degree.

When we come to the matter of regional physiology, we find ourselves in the midst of problems that still await complete solution. The first and capital fact in cerebral localizations was the discovery by Broca in 1861 of the speech centre in the posterior part of the third frontal convolution of the left hemisphere.[1] Thousands of observations have confirmed Broca's thesis, and lesions of Broca's convolution extending into the pre-frontal lobes are found to be attended not only with aphasia but with amnesia, — loss of the memory of ideas, as well as of words and verbal expression. Other considerations, such as the effect of destruction of these inexcitable (pre-frontal) lobes, go to show that their main function is psychical. Hughlings Jackson thinks that they are *par excellence* the motor substrata, but if any motor influence emanates from them (and anatomically these lobes certainly seem to be connected through the corona radiata with the motor portion of the cerebro-spinal axis), such motor influence must be of an inhibitory character, that is, restraining rather than exciting. We have certainly instances of motor neurility which is inhibitory in the cardiac branches of the par vagum, the depressor nerve of Cyon, etc. As to the functions of the parietal lobes, Ferrier's carefully conducted experiments seem to prove that they are motor rather than psychical; this is especially true of certain areas of gray matter bounding the fissure of Rolando, electrical stimulation of which produces definite motor results, destruction of these areas being followed by local paralyses, as of limbs. The phenomenon of descending degeneration of the medullary strands between Ferrier's cortical centres and the basal ganglia, in the case of lesions of the so-called motor regions, and the coincidence of this degeneration with similar degradation of the motor columns of the spinal cord, as noted by Charcot and Flechsig, seems to point to direct anatomical connection between the anterior and crossed pyramidal columns of the spinal cord and those cortical regions. Franck and Pitres have obtained similar results by section of the fibres proceeding from the gray matter bounding the fissure of Rolando, secondary degenerations occurring precisely similar to those which are seen in motor nerves after their separation from their trophic centres in the spinal cord, and they reason from this that "the medullary fibres between the cortical centres and the lower motor nuclei bear the same relation to the nerve cells of the cortex as the spinal motor nerves to the multipolar cells of the anterior cornua."

Experimenters working in the same direction with Ferrier (Carville and Duret, Luciani and Tambourini,

[1] The whole subject of aphasia is a complex one, nor have we yet the data for its complete exposition from the stand-point of definite anatomical bases.

Broca's convolution is regarded as the seat of language expression, that is, the centre from which volitional incitations to movements of articulation pass downwards. At the same time there are several well-attested cases on record which go to show that lesions in the neighborhood of (that is, posteriorly and below) Broca's centre are attended with aphasia, often with verbal surdity and blindness. I call particular attention to the Contribution to the Study of Aphasia by Dr. Balzer in the Gazette Medicale de Paris, March 1 and 15, 1884. In one of Dr. Balzer's cases there was marked motor aphasia and agraphia with verbal blindness and deafness and general intellectual obtusion. The autopsy disclosed (on the left side) softening of the first temporo-sphenoidal convolution, the lower portion of the inferior parietal lobule, and the *pli courbe;* that is, the centres of sight and hearing were involved. Here, although Broca's speech centre was not directly affected, it is easy to understand that an extensive lesion in the vicinity might have had a considerable inhibiting influence on that centre, especially when it is taken into consideration that an important branch of the Sylvian artery was found calcified. Moreover, the auditory and visual centres on the left side were destroyed. The language function is so associated with ideation generally, and normal ideation is so dependent on integrity of the perceptive centres, that serious lesion of the latter must impair (if it does not render utterly impossible) all reminiscential reproduction. In other words, verbal expression must be lacking when the memory of words is gone.

Balzer's second case was one of pathological "muteness." The left temporo-sphenoidal lobe was "a mass of pus." There was considerable congestion of the inferior portions of the left frontal lobe, and slight adhesions of the membranes. The observation is imperfectly reported, and on the whole is hardly to be regarded as evidence against Broca's doctrine

His third observation is carefully reported. It is a case of tuberculous meningitis on the left side, and the general symptoms, coupled with the post-mortem revelations, remarkably sustain the doctrines of localization as propounded by Ferrier. There was right hemiplegia and lesion on both sides of the fissure of Rolando, motor aphasia, verbal blindness and deafness, agraphia with meningo-encephalitis of Broca's convolution, the temporo-sphenoidal lobe, and the angular gyrus. Tuberculous meningitis seldom lends itself to the elucidation of cerebral localizations. In this instance the data were sufficient to sanction quite positive conclusions.

notably Yeo) have added confirmation to Ferrier's views, and hundreds of clinical and post-mortem observations have demonstrated the concomitance of general or limited paralyses with lesions more or less circumscribed of those portions of the parietal lobes now known as Ferrier's centres.

Among the important contributions which have appeared in American medical journals, throwing light on certain aspects of the subject, were signaled the papers by Seguin and Dalton in the *Medical Record* (1881). The "new phrenology" has been proved a valuable aid to diagnosis by the former, who has found Ferrier's statement of localizations to be, "not theoretical guides, but valuable life laws." The experiments of Dalton go to corroborate the position of Ferrier, that the angular gyrus is the seat of visual perception, blindness following its excision in dogs.

Allusion was made to numerous cases on record of abscesses of the hemispheres which have been diagnosticated by the local paralytic symptoms. The skull has been trephined, the abscess evacuated, and recovery has followed the operation. It is worthy of note, too, that Dr. Hughlings Jackson, reasoning from clinical and pathological observations of unilateral and localized epileptiform convulsions, formulated in advance of any experiments of Fritsch and Hitzig views of the ætiology of these convulsions, which are found to be in accordance with Ferrier's observations and those of his German predecessors. These obscure forms of epilepsy, referred by Jackson to irritative or discharging lesions of Ferrier's centres, are now known as "Jacksonian epilepsy." With regard to the various sensory centres (auditory, visual, gustatory, tactile, etc.) there is still great uncertainty; experimenters are not agreed as to the precise location of these centres in the cortex, nor as to the function of the occipital lobes.

Under his third head (psychical evolution, etc.) the essayist discussed the ancient phrenological hypothesis, which he considered unfounded and absurd. He advocated the evolutionary doctrine, which teaches — in opposition to the old view that mind is constituted by an assemblage of distinct faculties, having their seats in separate regions of the cerebral cortex — that "intelligence has neither distinct grades nor is constituted of faculties that are truly independent; its highest phenomena being the effects of a complication that has arisen by insensible steps out of the simplest elements." The only division of mind that has stood the test of the ages is the threefold division of intellect, feeling, and volition, and yet these three aspects of mind are, as Bain teaches, so dependent among themselves, although characteristic in their manifestations, that no one could exist alone, and feeling is the basic substance of mind. Intellect, moreover, is separable into only three factors: discrimination, or consciousness of difference; similarity, or consciousness of agreement; and retentiveness, or the power of memory or acquisition. The above being premised, it seems a necessary conclusion that identical parts of the brain are concerned in all the phenomena of mind.

The division of the cerebral hemispheres into lobes is artificial. There is everywhere intermingling of nerve fibres and nerve cells, and the closest blending of intercellular processes. The arrangements for diffusion of "nerve currents" are of the most perfect kind. Multiple as are the neural manifestations, there is practically, through all, the solidarity of a single unit.

The essayist, in taking up the subject of cortical centres with reference to a statement of Exner's modification of Ferrier's localizations, alluded to the views of Brown-Sequard and Goltz that the sensory and motor substrata of function are scattered over wide areas. This is possible by virtue of the well-known multiplicity of fibre connections, but improbable, and it presupposes the occupancy to a greater or less extent of a whole cerebral hemisphere by any voluntary operation.

There are strong considerations which favor the theory of localizations in limited areas of the cortex. In this seeming chaos of cells and fibres there must be orderly arrangement. If the cerebral hemispheres be a representation of inner relations answering to the most stable relations of the external cosmos, the order in the inner world must correspond with the order without. The law of physiological distribution of labor must apply to the cerebrum as well as to other parts of the economy. When you move your hand in obedience to a voluntary impulse, such motor excitation comes from a definite region of the cortex. It will always under similar circumstances come from the same cortical region. The fibres of the corona radiata which carry visual impressions to the cortex must pursue a definite route. Other sense impressions must follow, as it were, a beaten track to some region of the gray matter near the surface, when they are for a time concentrated, to be afterward, it may be, widely diffused, and blended with fibres of different sensory nature, and motor fibres. That the visual, auditory, and tactile centres occupy a wide area of the cortex seems probable when we consider the part which they have in building up the fabric of our mental experiences.

These opinions are in harmony with those expressed by H. Charlton Bastian in the "Brain an Organ of Mind," and other authorities. Bastian, who charily and reservedly admits the doctrine of localizations as applied to topographically distinct foci of sensation, while admitting the essential facts of motor localizations, was the first formally to propound the theory of "Perceptive Centres in the Cortex" in the *Journal of Mental Science*, 1869; also to state the view, supported of late by Exner, "that there may be much and compound overlapping of areas, and though the area pertaining to the impressions of any particular sense in the cerebral hemispheres may be a very extended one (not to speak of the still further complication brought about by the communication established between the nerve cells of the sense area with those of others in the same hemisphere, and the opposite hemisphere), still it may well be that certain portions of the surface of the cerebral hemispheres might correspond more especially to the *maximum* amount of nerve cells and fibres pertaining to some one or other of the various senses."

This theory of the overlapping of sense centres in the cortex and the wide diffusion of their cellular and fibrous connections has received striking confirmation from Exner's studies, to which attention was called in an editorial article in the *Medical Record* for April 15, 1882. According to Exner the cortical centres are rather areas of functional concentration than sharply demarcated sensory and motor foci, and the diffusion and interblending of fibres which there occur and the overlapping of one district by another afford a plausible explanation of the different results which have been noted in lesions of these districts, also of the recovery from functional paralysis which in animals so often

follows such lesions. In other words they are "vicariating areas."[1]

The cortical field of vision, according to Exner, corresponds more exactly with the region assigned to this sense by Muhr and Monk than to that assigned to it by Ferrier, namely, the angular gyrus. This perceptive centre has a relatively wide area in the upper and middle occipital lobes, extending thence into the cuneus. Here again Bastian's view is justified. According to Exner's observations the tactile fields correspond very closely with the motor fields for the same body regions, and this is in striking confirmation of the studies of Betz and Luys on the functional significance of the cells in the stratified zones. Luys believes that the submeningeal region, principally occupied with small cells, is especially connected with the phenomena of sensation, while the deeper regions, occupied by large cells (triangular cells of Luys, giant cells of Meynert), may be considered as the most important regions that give rise to motor phenomena. In studying this question Luys bases his conclusions principally on data acquired from a study of the spinal cord, which show that the regions of small cells have sensory functions (posterior cornua), while the regions of large cells (anterior cornua) are motor. Betz's special contribution to this micrographical study is that the large, so-called motor cells predominate in the neighborhood of the fissure of Rolando (Ferrier's excitable motor region).

The essayist in concluding remarked as follows: —

"On the whole the doctrine of localizations as propounded by Ferrier, with some probable modifications as above indicated, seems likely to be triumphant along the whole line.

"The question now presents itself, What is the explanation of this doctrine? What theory will best string together all these facts?

"The cerebral hemispheres, gentlemen, are, if we read comparative anatomy aright, a budding forth, an outcropping of the opto-striate bodies, the great sensori-motor ganglia; they are certain stories, as it were, added on to basal ganglia, and were called by Solly the hemispherical ganglia. The enormous augmentation of cells and fibres which compose these cortical centres bespeaks in the organism a higher and more complex system of adjustments of inner to outer actions, an extension of the correspondence in space and time, involving an increased amount of life and a longer continuance of life. Accumulating experiences in the race caused augmented development of the anatomical substratum representing those experiences, with its elaborate system of connections whereby those experiences are compared, and become combined and coördinated.

"I wish to be understood as hypothecating an immanent divine force raising matter through evolution to the sublimest organic plane, and developing out of the lowest nervous activities the highest powers of mind.

"I desire now to insist on the following points in elucidation of this difficult subject: If the cerebral hemispheres be an extension of the basal ganglia then the functions of these hemispheres cannot be essentially different from the functions of the basal ganglia. Assuming this we should expect, *a priori*, to find the same orderly arrangements for motor coördination in the cortex as we find in the lower ganglia, and as there is progressively an increase in the complexity of coördinations as we ascend the cerebro-spinal axis, so we are warranted in regarding the cerebral convolutions as the highest centres of muscular combinations, representing on a larger scale the combinations of the lower centres. Such being the case, as there are tracts in the inferior portions of the cerebro-spinal axis whose lesion causes local paralyses, so we should expect to find definite areas in the cortex whose lesion also would cause paralysis of a more or less local and limited nature. I have already shown that the facts are in harmony with this view. The gray matter in the neighborhood of the fissure of Rolando with its fibrillary prolongations in the corona radiata seems to contain the centres through which the will (I use this old metaphysical term to avoid circumlocution) acts downward on the corpus striatum, calling into play new cell combinations and the appropriate motor mechanism.

"With respect to the sensory and perceptive functions of the basal ganglia, called the sensorium by Dr. Carpenter, I would regard the cortical centres as simply the complement of those basal centres. Much confusion has been introduced into cerebral physiology by endeavoring to make an essential difference between the intelligential functions of the cerebral hemispheres and those of the sensorium, so called. The difference is only one of degree, not of kind. Luys is undoubtedly right in making of the optic thalamus a perceptive centre, in opposition to Dr. Carpenter, who considers it the centre of brute sensation. Every sensorial impression is to some extent *perceived* in the thalamus, although the elements constituting the complete perception of an object are largely supplied by the cortex. I would, then, style, after Luys, the sensory portion of the cortex the centres of augmented and completed perception. Such being the case I see no difficulty in understanding how the seats of common sensation and of special sense in the thalamus should have their representatives in the hemispheres. It may well be, moreover, that these cortical centres by education and development do finally in the highest creatures acquire such predominance that without their coöperation every sense impression shall be confused, unreal, or even *nil*. Hence the blindness that follows destructive lesion of the angular gyrus, and which in the lower animals is said gradually to be recovered from, probably by, the lower sight centre, which Luys locates in the thalamus, gradually taking on increased function. These are abstruse subjects, a provisional solution of which must for the present be sought in deductions from the general doctrine of evolution, which is shedding so much light on all difficult physiological problems."

[1] This view (of overlapping and diffusion) does not seem to me to be essentially different from that advocated by Dr. Hughlings Jackson in his recent Croonian Lectures. "It may be said that one convolution will represent only the movements of the arm, another only those of speech, another only those of the leg, and so on. The facts show that this is not the plan of structure of the nervous system. Thus, to take an illustration, the external parts, x, y, and z, are each represented by units of the corpus striatum. But the plan of representation is not that some units contain x largely only, as x^3, others y largely only, as y^3, but that each unit contains x, y, and z; some, let us say, as x^3, y^2, z; others as x^2, y^3, z, etc. When we come to the still higher evolution of the cerebrum we can easily understand that if the same plan be carried out a square inch of convolution may be wanting without palsy of the face, arm, and leg, as x, y, and z are represented in other convolutions, and we can also easily understand that discharge of a square inch of convolution must put in excessive movement the whole region, for it contains processes representing x, y, and z with gray matter in exact proportion to the degree of complexity." This doctrine of compensation, Dr. Jackson thinks, applies to representation of movements in the mid cerebral region of dogs. Destruction of a part of the dog's mid cortex entails no permanent paralysis, but discharge of any part of it produces convulsion. — *London Lancet*, April 26, 1884, page 743.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

NOVEMBER 10, 1883.

THE MEDICAL TREATMENT OF UTERINE FIBROIDS.

Paper by DR. BLAKE.

DR. CHADWICK gave corroborative testimony as to the danger of removal of mural fibroids when of any size, — that of a billiard ball, or larger. He had removed a number, but considered them a very dangerous class of cases. One, which he had occasion to remember, was that of a very stout woman, with a sessile fibroid, not projecting into the uterine cavity, extremely hard, enucleable only as far as the fingers would reach, namely, only two thirds of its whole connection. The fingers and scissors could not be used together for want of room, and finally the operation had to be abandoned. This was at one P. M. At four P. M. a tremendous chill occurred, and an intra-uterine antiseptic douche was administered. The pulse and temperature nevertheless jumped up, more chills occurred, and twenty-four hours after the operation the woman died from septicæmia. The autopsy showed a tumor two thirds the size of the fist, its surface gangrenous. The liver looked like bread, it was so full of gas.

Two or three weeks afterwards Dr. Chadwick operated upon another case, and succeeded by digging and pulling and cutting in cleaning out all the growth in the course of an hour. Septic poisoning took place, and was arrested only by the intra-uterine douche of permanganate of potash. The disease was fought for two or three weeks, and the patient finally pulled through. Dr. Chadwick said he would not again undertake a similar case without the alternative of performing abdominal section in case the tumor could not be extracted. Dr. Chadwick referred to cases in other hands with similar results. He had found it difficult to dilate the cervix sufficiently for the operation, even with the aid of two or three successive batches of tents.

DR. SINCLAIR said he had never had a death following the operation of removal of a fibroid tumor; but might have had, and had seen death ensue from the operation in other hands, and considered it especially dangerous if any part of the tumor was left behind. Such a growth was infinitely more difficult to remove than an ovarian tumor.

DR. CURTIS spoke of the advantage in many cases of fibroids of tiding the patient along and waiting for the assistance of nature, even if there was serious hæmorrhage to call for interference. He recalled several cases of women who with such growths had been so treated, and were now able to walk or ride and enjoy comparatively decent health.

DR. LYMAN quite agreed with what had been said. He suggested the propriety in such cases of going back to the original proposition of Atlee, — the first man who ventured, forty years ago, to incise the fibroids, — a long free, but not deep, incision of the capsule, after which there was a much greater chance of expulsion by the use of ergot. The chief danger to be feared in this was sphacelus of the tumor and resulting septicæmia. Dr. Lyman had seen the operation of enucleation fail in the best of hands, and spoke of the difficulty of access to the tumor, the finger filling the uterine neck, after dilatation, more or less completely. Two methods only seemed to offer any really satisfactory results, namely, ligation of the tubo-ovarian artery on either side, as proposed by Mr. Thornton, thus diminishing the circulation in the organ; and, secondly, the removal of the whole uterus, although this operation we know had been attended with immense mortality in Continental hands, but Mr. Keith's results were encouraging. Fibroids easily enucleable were extremely rare. The two chief objections to the operation were its length, and the amount of laceration of tissue exposing the patient to the almost certain supervention of septicæmia.

DR. CHADWICK observed that there was one method of cure which had not been referred to, — pregnancy. In every case of a dozen or fifteen of this sort in his own experience the result of the supervention of pregnancy had been the complete disappearance of the tumor during involution and after parturition, and in all these cases but two the labors had been easy and natural.

DR. LYMAN said he was inclined to take the opposite view from that of Dr. Chadwick, and thought it very fortunate that women with such tumors did not generally get pregnant. If a uterine fibroid diminishes during involution so may it take on an increased size during evolution. Dr. Lyman quoted Dr. Thomas, who thought it a great misfortune for a woman with uterine fibroid to become pregnant. Dr. Lyman inquired of Dr. Chadwick the grounds for his position.

DR. CHADWICK replied [to Dr. Lyman] that his statement was based on his own experience, which he knew to be at variance with the commonly accepted views.

DR. LYMAN remarked that the woman was very likely to miscarry, in which case the liability to unfortunate complications must be greatly increased by the presence of a fibroid in the organ.

DR. SINCLAIR said he regarded Dr. Chadwick's view as correct, but had considered those cases which had disappeared during involution as sub-peritoneal.

DR. RICHARDSON said he would agree with Dr. Chadwick in part, in part differ. He had seen several cases of intra-mural fibroid which had disappeared as the result of pregnancy, although they were liable to occasion miscarriage, and had apparently in some cases been the cause of bad post-partum hæmorrhages. If the tumors have their origin near the placental site an irregular contraction of the uterus is liable, including the placental region, interfering with the proper closure of the uterine sinuses. In four of six or seven cases post-partum hæmorrhage had occurred. In three of the four it had been necessary to remove the placenta by hand to aid in arrest of the hæmorrhage, and in all these the tumor was under or near the placenta.

DR. FORSTER, on the question of the influence of pregnancy in causing the removal of fibroids, remarked that in a case of an extra-mural tumor under his care, which Dr. Baker had seen in consultation, the latter had advised that a contemplated marriage be consummated, as a pregnancy following might cause the disappearance of the tumor.

DR. CHADWICK, in reply to questions, could not state whether the tumors in the cases referred to by him were intra-mural or sub-peritoneal, a point which could not be determined after the pregnancy had advanced two or three months, as was the case when he first saw his patients.

Dr. Sinclair questioned whether there were not more or less of a pedicle in Dr. Chadwick's cases.

Dr. Chadwick said that there was no pedicle in his cases.

Dr. Richardson stated that he had seen two cases with pedicles, in both which pregnancy resulted disastrously.

Dr. Elliot observed that the sense of the meeting seemed to be that mural fibroids should not be removed on account of the danger of septicæmia. He had seen several removed successfully. The cases cited showed how dangerous such may be. They should make us more careful about antiseptic precautions, but should not deter one from performing the operation. He thought that a more antiseptic operation would give better results than the cases here reported. The largest tumor of the kind he had seen was removed by Schroeder, and it was so large that it was difficult to pull it through the pelvis; the cervix was not only dilated, but slit on either side; the operation was done under full antiseptic precautions. Dr. Elliot himself used plugs to dilate the cervix, and had found no difficulty in accomplishing this, which, if not sufficient, could be augmented by slitting the cervix. Moreover, the dilatation improved under the manipulation.

PUERPERAL CONVULSIONS.

Paper by Dr. Blake.

Dr. Blake referred to the cases of Dr. Staples, of Dubuque, all cured by the subcutaneous injection of veratrum viride. In his own [Blake's] cases no morphia was used.

Dr. Homans stated his belief that patients generally get well of convulsions unless these were apoplectic or there were disease of the kidneys; seventeen cases out of twenty recovered. The majority of ordinary cases were hysterical.

Dr. Richardson asked Dr. Homans whether he would terminate the labor in a case of ante-partum convulsions.

Dr. Homans referred to a case in which, convulsions occurring at the seventh month, the patient was treated with rest, ether, bromide of potassium, and went on to full term and a natural labor.

Dr. Richardson said he was glad to hear that Dr. Blake put his reliance on chloral rather than morphia. He had seen forty-three cases of puerperal convulsions, and the only two that died were the only ones which had been bled. There were cases undoubtedly in which bleeding was the best treatment. In Dublin this summer he had observed that the practice was to do nothing, — let the woman alone, — but it had seemed to Dr. Richardson that by this course patients there had been lost which might otherwise have been saved. Cases that come on post partum, Dr. Richardson remarked, are of a very grave character.

Dr. Homans said that when he first began to practice, if the woman was swollen and flushed, it was the practice to bleed.

Dr. Edes quoted Dr. C. C. P. Clark as saying that every case of convulsions should get well if treated by the subcutaneous injection of morphia to the amount of three grains at once. He wished to know whether the Obstetrical Society had any experience with such large doses.

Dr. Lyman said that it was the practice in New York to administer morphia, but he had never heard of the large dose in that connection.

Dr. Richardson stated that he had used as much as two grains of morphia, but thought chloral was much better, and left the patient in a better condition. When the convulsions came on he used ether, but chloral regularly. Dr. Richardson asked if any one had seen a convulsion occur when the patient was completely etherized.

Dr. C. Ellery Stedman said he had seen one case occur, and he believed the etherization was complete.

Dr. Blake objected to the use of morphia in these cases on the ground that it was liable to impair the activity of the kidneys.

Dr. R. B. Dixon exhibited two instruments of his own invention, a trephine and a blunt hook and knife combined.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. Nancrede, M. D., Recorder.

Thursday evening, May 23, 1884. The President, Dr. Tyson, in the chair.

A CASE OF PAGET'S DISEASE.

Presented by Dr. W. G. Macconnell for Dr. Jos. Hearn.

This breast was removed at the Jefferson College clinic by Dr. Hearn, Saturday, May 17, 1884. History: Mrs. Baker, aged thirty-nine years, has been married for nineteen years, and has borne four children, and has had one miscarriage. No other member of her family has ever labored under any form of tumor. Four years ago, following a pustular eruption which she observed on her abdomen, a lump was noticed in the left breast, which was the seat of a lancinating pain of an intermittent character. Previous to the discovery of the lump an eruption of an eczematous nature was noticed; it had existed some seven or eight months before she noticed the lump. The nipple, at the time of the operation, was thoroughly retracted, indeed, had melted away. There was no axillary involvement, although there was noticed a gland at the upper and inner quadrant of the breast. On section of the tumor after its removal several small nodules of a hard, fibrous consistence were encountered. Microscopically I found them to be the seats of carcinoma of a scirrhous nature. The gland revealed a similar condition.

COLLOID CARCINOMA.

This tumor was removed by Dr. Hearn at the Jefferson Medical College Hospital, about one week previous to the removal of the other breast. History: Miss Catharine Brooks, aged sixty-seven; general health good; family history that of phthisis. No other member of her family had ever labored under any form of tumor. About three years ago she felt a lancinating pain in the right breast. On examination she found a lump, which was hard, roundish, and about the size of an English walnut. It continuously tended to increase, when, at the end of eighteen months, it had attained the size of an egg. She consulted a quack, who applied a salve, which she states caused some bleeding. Two months before her admission to the hospital she states that the breast began to "gather," and one week previous to the operation "it broke, and a dark greenish fluid escaped," which was afterwards followed by the extrusion of a mass of greenish-colored slough.

The growth was attached to the overlying skin, but not to the pectoral tissues beneath; the subcutaneous veins were enlarged and prominent; no glandular involvement existed. On section the tumor was found to be densely hard, and the seat of small cavities filled with a glairy, gelatinous, semi-solid fluid. Microscopic examination showed alveoli filled with epithelium that had undergone fatty degeneration, not a few of them showing the peculiar laminated appearance peculiar to colloid. The connective tissue of the stroma was in a state of active proliferation, due, probably, to the inflammation resulting from the cystic change already mentioned.

SARCOMA OF TESTICLE.

Presented by DR. G. DE SCHWEINITZ.

This growth was removed from S. H., aged thirty-seven, married, a patient of DR. JOHN ASHHURST, in the surgical ward of the University Hospital. His father and mother are living, and in good health. His grandparents died in old age, having led healthy lives. Of his two brothers and two sisters all are living, and three of them have been thus far in good physical condition. One sister had a growth removed from the orbit, probably a sarcoma, which is now beginning to recur. His own health has been good. He denies any venereal disease. Two and a half years ago he first began to notice a globular swelling at the bottom of the left testicle, which gradually increased in size until eight months ago, since which time the growth has been rapid, so that at the time of operation the circumference of the testicle measured fourteen and a half inches. Pain has been insignificant until last April, since which time he has suffered with severe dragging pains. The inguinal glands on both sides were slightly enlarged. The growth occupies the body of the testis, being surrounded by the tunica albuginea and tunica vaginalis, which are intact. It is a large, somewhat irregular, moderately soft, blood-stained mass. In one end there is an area of cystic degeneration. Microscopic examination shows this tumor to be a sarcoma of the round-cell variety, the cells being moderately large, containing oval nuclei or sometimes nucleoli. In places a faint reticular net-work is demonstrable, producing a picture similar to the "lymph-gland like" round-cell sarcomas.

PHILADELPHIA CLINICAL SOCIETY.

G. BELTON MASSEY, M. D., RECORDING SECRETARY.

STATED MEETING, MAY 23, 1884. DR. HENRY BEATES, JR., in the chair.

DR. MARY WILLETS reported a

PUERPERAL CASE WITH NUMEROUS COMPLICATIONS.

Mrs. H., aged thirty, primipara, after a normal delivery did well for twelve days. Then, after pain in her back and limbs and chilly sensations, had a rise of temperature, and was attacked with nausea and vomiting. The temperature continued high for two weeks. There was nothing to account for the supra-normal temperature except a laceration of the cervix uteri and some tenderness around this point. On the twenty-fifth day after delivery the patient complained of pain in her left leg. For more than a week there was pain and swelling both above and below the knee; the pain greatly increased on pressure and attempted extension of the limb, and was in the course of the femoral vein, but careful examination failed to discover anything abnormal. On the forty-third day, the patient having recovered sufficiently to go down stairs, we were suddenly confronted with well-developed mania, at first violent, but subsequently becoming merely loquacious. This continuing two days gave place to somnolence, and five days later to convalescence.

DR. E. E. MONTGOMERY remarked that the case was unusual from the lateness at which the fever appeared. During his present term at the Philadelphia Hospital measures had been instituted to prevent the contact of septic matter with the parturient parts. A solution of corrosive sublimate, one to two thousand parts, was used to sponge the parts after placental delivery, and cloths saturated with the solution were kept in place by absorbent cotton, oil silk, and a tail bandage. There had been but three cases of septicæmia during the present quarter.

DR. A. H. SMITH said the local examination which the reader of the paper had very properly made solved the whole problem. Together with the symptoms it showed the case to be one of pyæmic — not septicæmic — poisoning in a woman feeble and unable to resist the absorption of pus. Septicæmia cannot arise after all open surfaces have become purulent. The examination was valuable, and he thought it would be better if more care was generally exercised in this direction.

DR. PHILIP M. SCHIEDT read a paper on the

CLINICAL PHENOMENA FOLLOWING THE PUERPERAL STATE IN TWO CASES.

In the first case he was suddenly summoned to the bedside of a woman aged about thirty-five, whom he found comatose, with undilated pupils, head drawn to left side, and flexed on the chest, a clammy sweat on forehead, and imperceptible pulse. The heart sounds were faintly detected, and the body and extremities warm. Restoratives and artificial respiration were without avail, and the patient soon expired.

The history of the case, subsequently ascertained from the family physician, was as follows: She had been delivered of a child after a natural labor two weeks previously, which was followed by a normal convalescence unaccompanied by fever or offensiveness of the lochial discharge. Her babe was healthy, was regularly nursed by her, and she was doing so well that her physician had ceased his visits. On the morning of her death she felt unusually well, but about nine o'clock complained of some headache, vomited a little mucus; had a heavy chill; became unconscious, and was found by me in the condition described, which soon terminated in death.

The notes were presented to the Society for the purpose of obtaining the opinions of its members as to the cause of death, the writer expressing a belief in its cardiac origin.

The other case was one of

TEMPORARY BLINDNESS FOLLOWING LABOR.

After a perfectly natural labor, three hours in duration, the mother failed to see her child when presented by the nurse. It was found that she was perfectly blind and unresponsive to the candle test. She remained fully conscious and in possession of other senses. This continued three days, and was followed

by gradual and complete recovery. During this time there was nothing otherwise abnormal in her condition. There was no œdema, therefore no examination of the urine was made. Previous to confinement she had been well able to attend to her duties.

Dr. L. Brewer Hall, in discussing the second case, said the most plausible explanation of such rapidly disappearing blindness was œdema giving rise to choke disk. The cases reported have not been properly examined by an ophthalmologist, an omission frequently inexcusable. Some cases do not get well, and then we find an atrophy of the optic nerve. He had seen quite a large number of hysterical cases, at times monocular, and such cases are easily diagnosticated by feints and attempts to discover that they do see while off their guard. Some one should always be called in in these cases to make an ophthalmoscopic examination.

Dr. Albert H. Smith acknowledged the want of exact information, while the uræmic origin of such cases had been assumed.

Dr. G. Belton Massey denied the necessity of assuming that cases of hysterical blindness were mere malingerers. Such patients at times may be perfectly honest in their inability to see, the real condition being one of divorce between the volitional and intellectual powers of the mind.

Dr. E. E. Montgomery read a paper on

TRACHEOTOMY IN CROUP AND DIPHTHERIA

based on an experience of twelve cases, one of which, a case of diphtheria, had recovered, and was exhibited to the Society. Five of the operations were for diphtheria, the remainder for croup. In all the operation was one of last resort, and the series teach the importance of early operation. Death occurred most frequently between the third and fourth days; one died in fifteen hours, a second in thirty-six hours, and another on the ninth day. In the successful case the canula, owing to laryngeal spasm, remained until the twenty-fourth day. In operating he gives chloroform, and avoids hæmorrhage by transfixing a fold of skin, held by himself and assistant, making an incision 1″ long, completing the dissection to the trachea by the forceps and grooved director. After opening the trachea care is observed to remove all membrane previous to insertion of canula. After-treatment consists in attention to tube, keeping several thicknesses of tarlatan wet with hot carbolized water over it. The temperature of the room is maintained at between 75° F. and 80° F., and stimulants and good food given together with quinia, tincture ferric chloride, and corrosive sublimate, the latter in frequently repeated doses. The attempt is made to dispense with the tube from the fifth to the eighth day, but it should not be removed until respiration *per vias naturales* is fully established. From these cases he draws the following conclusions: (1.) That tracheotomy is justifiable in diphtheria as well as croup. (2.) That it should be performed in croup when it is evident that drugs do not control the progress of the disease, particularly when there is depression of the lower end of the sternum during inspiration; in diphtheria with the advent of suffocative symptoms. (3.) That in the performance of the operation the knife should only be used to incise the skin and trachea, the intervening tissue being torn by director and forceps. (4.) That the subsequent use of proper drugs will promote a favorable result.

Dr. Collins recalled several flattering cases which in a few days showed crape on the door. He doubted the propriety of anæsthesia, but thought the operation justifiable if only as a means of easing death.

Dr. William H. Parish said this operation, which was one of the easiest in performance, should be resorted to whenever the symptoms were of such a character as to show impending suffocation. To determine this required no little judgment, and he recalled a case of recovery without operation where both himself and Dr. Allis had agreed it should be performed. He treats diphtheria by large doses of chlorate pot. and iron.

Dr. W. H. Warder, in discussing the treatment of diphtheria, thought the chlorate of potash and tincture ferric chloride most successful in ordinary cases. In more malignant ones had resorted to calomel in five-grain doses. In a case which Dr. Pepper had seen with him the latter advised a continuance of this plan for forty-eight hours. At the end of this time forty grains had been taken. A large and offensive evacuation followed, and the child recovered. He did not think such large doses usually necessary, however. Much of the calomel passed without other change than oxidation.

Recent Literature.

Malignant Disease (Sarcoma and Carcinoma) of the Larynx. By Henry T. Butlin, F. R. C. S., Assistant Surgeon and Demonstrator of Diseases of the Larynx, St. Bartholomew's Hospital. London: J. & A. Churchill.

This little book will prove of value not only to laryngologists, but to all interested in the life-history of the malignant growths of which it treats. The author has already published a work entitled "Sarcoma and Carcinoma," of which the monograph before us may be considered a continuation. In the former work Mr. Butlin studied malignant disease as it affects the bones, œsophagus, tonsils, etc., while in this essay he confines himself to sarcoma and carcinoma as they occur in the larynx. The most important outcome of the inquiry, as the author says, is the discovery of the influence which is exercised over the whole course of a malignant tumor by its origin. To be convinced of this fact one need only compare the course of central with subperiosteal sarcoma of bone, of sarcoma of the breast with sarcoma of the tonsil, of squamous carcinoma (epithelioma) of the lip with squamous carcinoma of the tongue. The importance of the local study of these diseases on a larger scale than heretofore is insisted upon. The larynx is well suited for such a study, and the author's labors result in showing the wide difference which may exist in the course pursued by sarcoma and carcinoma of the same organ, and how even carcinomas arising from different parts of the same organ pursue habitually a very different course even when the structure of the tumor is the same. The cases reported number seventy-three, of which twenty-three are sarcomas and fifty are carcinomas. It is pointed out that this difference does not show the true numerical relation which exists between sarcoma and carcinoma of the larynx, for carcinoma is so common that individual cases are not usually published. The author has excluded all cases in which a

microscopic examination has not been made. Krishaber's division of sarcoma and carcinoma of the larynx into intrinsic and extrinsic has been adopted. Intrinsic sarcoma of the larynx rarely, if ever, affects the lymphatic glands or becomes disseminated. The author thinks that the obstacle to glandular affection is mechanical, and suggests that as the cells proliferate the solid structures gradually swell, and the lymphatic vessels suffer a diminution of their calibre, which proceeds to their complete obliteration, and renders them incapable of transmitting the infecting material of the tumor. Before attempting any treatment we must be sure of the diagnosis, which is best accomplished by removing a portion of the growth by the intra-laryngeal method with forceps, and subjecting it to microscopical examination. Intrinsic sarcoma, even in advanced cases, may be successfully treated by complete removal of the part from which it grows, which may necessitate partial or complete extirpation of the larynx. Extrinsic carcinoma infiltrates deeply, and affects the lymphatic glands early. Attempts at removal even by extirpation of the larynx and the neighboring glands afford not the slightest prospect of success or even of temporary benefit. Intrinsic carcinoma is a much less formidable malady. In cases in which the disease is limited to the cavity of the larynx, and the glands are not affected, partial or complete extirpation of the larynx may be performed. But if the disease has spread beyond the larynx, or there is enlargement of the glands, the prospect is almost as hopeless as in cases of extrinsic carcinoma.

Cases, whether of sarcoma or carcinoma, which appear unsuited for a radical operation of whatever kind may often be greatly benefited by an early tracheotomy.

Dictionnaire Annuel des Progrès des Sciences et Institutions Médicales. Par P. GARNIER, Médicin, etc., etc. Dix-neuvième année, 1883. Paris: Felix Alcan, Éditeur: 108 Boulevard, St. Germain. 1884. 501 pages. 12mo.

This very useful volume comes to us rather late though it may have been issued with due punctuality. It is a kind of French Braithwaite, with this essential difference, that it gives abstracts, not extracts merely, and marks out what of value an article contains, or wherein an advance has been made.

Next year, the twentieth of the series, the author promises a complete index which will be of great service to any one seeking what has been gained in any medical matter during the last twenty years.

In his usual summary of the last year's work the author gives due prominence to the labors of the microscopists. To such a degree have their activity and efforts been lately absorbed in the search and discovery of organisms attendant upon diseases, that he appears to think that the year 1883 will figure grandly in the annals of medicine on its millennial anniversary should the capital work done in it for tuberculosis justify the predictions already announced. For ourselves, however, we cannot fully anticipate for posterity such a "happy return of the day." To our mote-obscured vision these bacilloids appear to be great *beams* in the eyes of experimenters, rather than efficient causes of disease. So far as proof goes at present they seem somewhat analogous to larvæ which sometimes infest exposed ulcers, or pus-secreting surfaces. We beg pardon, hardly hoping, in these days of irreverence for the infinite and the infinitesimal alike, for forgiveness for such evidence of unreclaimed Philistinism. We refer the reader to the *Dictionnaire*.

Time and space will not allow of further notice of this Annual at present. Every one who wishes a ready reference book for what has been going on in the medical world during the period of its existence should have a copy at hand. *

The Veins of the Brain and its Envelopes. Their Anatomy and Bearing on the Intra-Cranial Circulation. By WILLIAM BROWNING, M. D., Brooklyn. Brooklyn, N. Y.: F. B. O'Connor, Jr. 1884.

The first sixteen pages of this monograph appeared in the *Annals of Anatomy and Surgery*, now unhappily defunct, so that the author was obliged to publish as a thick pamphlet what was apparently meant to be a series of articles. We are glad he has done so, for it presents the results of much careful work of a kind that is carried on too rarely among us. Indeed, the anatomical part of this paper is the record of work done in Professor Braune's laboratory at Leipsic. The veins of the brain were carefully injected, classified, and described. The work is done in a thorough manner, and the book before us is very much the best authority we know of for the anatomy of the intra-cranial veins. The author, moreover, shows himself familiar with the literature of the subject We are inclined to think he hardly does Rüdinger justice in the question of the originality of his views on the Torculæ. The work is necessarily of the driest, and little can be well extracted for special mention, but we must allude to the important discovery that the common views of the great vein of Galen are incorrect. It is usually described as running backwards into the straight sinus; in point of fact it winds up behind the splenium of the corpus callosum, and runs forward before turning back to join the sinus. The English of this paper leaves a good deal to be desired, the construction and idioms are so evidently German. It shows, however, German method and industry, and is of real value. T. D.

Female Hygiene and Female Diseases. By J. K. SHIRK, M. D. 12mo, 107 pages. Lancaster, Pa.: The Lancaster Publishing Co., 1884.

This book is intended for the "instruction of the laity": it gives some good advice on matters of hygiene, and some that is, to say the least, questionable, *e. g.*, on page 16, that "every civilized woman should rest in the recumbent posture during a good part of every menstrual period." If however the author had confined himself to this part of his subject, his book might have been productive of good results; but he has attempted to describe in popular language the various diseases of women, their symptoms and causes, and has given advice and prescriptions for their treatment: this part of the book we believe will be productive of harm. No woman is the better, in our opinion, for knowing anything about her ovaries or fallopian tubes: nor do we believe it expedient to instruct the laity how to treat amenorrhœa. The author's motives in writing the book we do not question; but we cannot approve of the class of books to which this belongs.

C. M. G.

Medical and Surgical Journal.

THURSDAY, JUNE 12, 1884.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

THE EIGHTH INTERNATIONAL MEDICAL CONGRESS.

THE programme of the next International Medical Congress, which is to be held at Copenhagen in August, has just been issued. The session will open on Sunday, August 10th, and close on Saturday, August 16th. The programme as published contains a list of papers promised and subjects to be discussed, but the definite programme of each day's work has not been made public. As on previous occasions the official languages are to be French, German, and English. The addresses in the general meetings are to be given by Professors Virchow and Pasteur, Sir William Gull, Professors Tommasi Crudeli, of Rome, Verneuil, of Paris, and Panum, of Copenhagen. Sir William Gull will speak on behalf of the Collective Investigation Committee of the British Medical Association on International Collective Investigation of Disease.

There are to be fourteen Sections: Anatomy, Physiology, General Pathology and Pathological Anatomy, Medicine, Surgery, Obstetrics and Gynæcology, Ophthalmology, Pediatria, Dermatology and Syphilis, Psychiatria and Nervous Diseases, Laryngology, Otology, State Medicine, and Military Medicine. Certain of these Sections are to hold joint meetings to hear papers and consider certain subjects that equally concern both divisions. The Sections meet daily from ten to twelve and from one to three. The general meetings will be held from four to half past five, with some extraordinary assemblies in the evening at eight. The work laid out in the Sections gives promise of little leisure. The subjects chosen cover a wide field, and embrace most of the matters in which special interest has been shown of late.

The prominent position in the Congress of matters relating to bacteria, the germ theory and its applications, is very noticeable. Professor Pasteur's Address before the general meeting is to be on Morbific Micro-Organisms and Vaccine Matters. In the Section of Pathology Professor Chauveau, of Lyons, will consider the Tuberculosis of Domestic Animals as a Source of Human Tuberculosis. Professor Bang, of Copenhagen, will read a communication on Tuberculosis of Cows' Udders and Inoculation with Milk from Tuberculous Udders. Koch will discuss the Variability of Pathogenic Bacteria, Cornil, of Paris, will consider the Transformations of Cellular Elements in an Inflammatory Focus of Bacterial Nature. Drs. Friedlaender, of Berlin, and Salomonsen, of Copenhagen, will respectively demonstrate the Pneumonia-Micrococcus and Cultures of Bacteria in Capillary Tubes.

In the Section of Medicine Professor Bouchard, of Paris, will present a communication on the Antiseptic Treatment of Acute Infectious Diseases; Professor Ewald, of Berlin, on the Ætiology, Diagnosis, Prognosis, and Treatment of Tuberculosis as Influenced by Recent Experiences in Pathological Anatomy and Experimental Pathology. In the Section of Surgery the Most Important Methods of Antiseptic Treatment of Wounds will be treated by Professors Lister, Mosetig-Moorhof, of Vienna, Paul Bert, of Paris, and Esmarch, of Kiel, and Dr. Schede, of Hamburg. In the Section of Gynæcology Professor Mikulicz, of Crakow, will present a communication on Antiseptics in Laparotomy; Dr. Rupprecht, of Dresden, will discuss the Choice of Antiseptics for Treatment of Wounds in Children; Dr. Unna, of Hamburg, will consider the Rôle of Micro-organisms in Skin Diseases not Formerly Considered Parasitic, and the Antiseptic Treatment of Wounds in Time of War will be considered by Professor Esmarch, Sir W. MacCormac, Dr. Neudörfer, of Vienna, and Dr. Strube, of Berlin.

The Americans whose names appear as authors of communications promised are not numerous. Prof. Austin Flint will present a paper on a Uniform Nomenclature of Auscultatory Sounds in the Diagnosis of Diseases of the Chest; Dr. Solis Cohen will consider the Prognostic Significance of the Several Local Manifestations Observed in Tuberculosis of the Larynx; Dr. Lefferts, of New York, will treat of the Removal of Foreign Bodies from the Larynx; Dr. Bosworth, of the Singing Voice, its Proper Method of Training; and Dr. French, of Brooklyn, of Photography of the Larynx; and Dr. J. Orne Green, of Boston, will read a paper on the Diagnosis of Intra-Cranial Complications in Suppurative Inflammation of the Middle Ear.

Not only is the scientific programme inviting, but the opportunity for a visit to so charming a capital as Copenhagen should lead to a larger attendance than the few Americans who have promised to take part in the exercises would seem to indicate.

A NEW LINE OF RESEARCH FOR CEREBRAL PHYSIOLOGISTS.

IT is one of the postulates of the new cerebral physiology that every member or organ has its representative centres in the hemispheres. The advocates of cerebral localizations have, with great definiteness, mapped out on the convolutions centres for movements of the eyes and mouth, extension or flexion of the arm and hand, complex movements of the thigh, leg, and foot, etc., and the organs of special sense, and even the viscera are believed to have an intimate relation with certain cell groupings in the hemispherical ganglia. The facts on which this doctrine is founded are already sufficiently known through the writings of

Ferrier, Charcot, and others. We wish to call attention to-day to one line of research which may possibly be fruitful in results of great corroborative value as far as the localization theory is concerned. If, corresponding to the members of the body, there are certain positive differentiated cortical foci, then must lesion of those members have some disturbing influence on their encephalic representatives, and suppression or removal of the former will be likely to be attended with atrophy of the latter. Facts confirmatory of this way of thinking are yet few in number. A case is recorded by Sander in *Centralblatt* for 1875, in which the loss of a limb was accompanied by marked wasting of the corresponding motor region of the cortex. Similar observations have now and then appeared in other journals. Some of these are, however, discordant, as is the case reported by Luys, where the atrophy occurred in a region of the cortex to which motor functions are not assigned.

Recently Raymond, of the Hôspice des Incurables, has communicated to the *Progrès Médical* the details of a case which is a contribution of some value on the positive side of the question. It concerns a patient aged thirty-one, who died in the Hôtel Dieu of tuberculous meningitis. Eleven years previously this patient had undergone amputation of the left arm at the shoulder. The meningeal tuberculous disease from which he died was consecutive to chronic pulmonary phthisis. The autopsy revealed the ordinary lesions of granular meningitis, but the striking feature, and that which makes it of interest in this connection, was the existence of pronounced atrophy in the right hemisphere of those very portions of the convolutions bounding the fissure of Rolando (ascending frontal and ascending parietal) to which have been assigned by Hitzig, Ferrier, and other recent experimenters the psycho-motor direction of the left upper extremity. The atrophy, it is true, was somewhat more extensive than the area pertaining to these centres, and the shrinkage of the superficial zones was more marked in front of than posteriorly to the fissure of Rolando, but the fact remains that there was found deficiency, as if by want of development or atrophy, of the supposed centres of all the movements of the left arm, forearm, and hand. No degenerative lesion or asymmetry of any other portion of the cerebro-spinal axis was noted.

It must be confessed that the evidential value of this observation, as of others of a like nature, needs qualification by the doctrine (if true) which has been formally stated by M. Féré, that the opposite lobes of the cerebral hemispheres are habitually asymmetrical.

THE ONE HUNDRED AND THIRD ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY.

THE annual meeting of the Massachusetts Medical Society is still in progress as this number of the JOURNAL goes to press. We therefore defer any reports or comments for another week.

At an adjourned business meeting on Tuesday afternoon, about a quarter of the membership being present, it was voted, by a large majority, to admit women to examination by the Censors, a vote which was concurred in at the meeting of the Councilors in the evening, sixty-three voting in the affirmative and forty-seven in the negative. This action we believe to have been the result of somewhat mixed motives, but whatever the motives or the method the Society has committed itself, and we have simply to chronicle the results.

MEDICAL NOTES.

— In a recent communication to the Académie de Médecine M. Luys took novel ground as to the mobility, or rather the locomobility, of the brain. He believes that the cerebral mass is subject to the laws of gravity, and that an empty space occupies whatever portion of the cranium is uppermost at the time being, varying, of course, according as the individual is upright, recumbent, or inverted. In lateral decubitus, for instance, the falx cerebri is displaced, and the vacant space is between the skull and the temporal lobe. He believes that this movement does not take place suddenly, but occupies five or six minutes in being accomplished. In the following session of the Académie M. Béclard opposed the opinion pronounced by M. Luys. He thought that the word "movement" was badly chosen to represent what passes in the cranium, and would prefer "commotion" or a change in the volume of the cerebral mass, which after all was very limited, and to be explained by the number of vessels it contained. He himself could not accept the idea of total displacements as entertained by M. Luys, for there did not exist in the cranial cavity any space that was not occupied either by the brain itself, the venous plexus, or the cephalo-rachidian liquid. M. Luys, in replying, maintained what he had already advanced, and was followed by M. Jules Guerin and M. Collin, who were both in favor of the theory of cerebral displacement under the conditions already mentioned. The clinical bearings of this theory, if it shall become established, will be important with reference to the relations of position, and especially of changes in posture upon vertigo, syncope, and other symptoms referable to circulatory conditions inside the cranium.

— It is reported of Bishop Smith, the senior bishop of the Protestant Episcopal Church, who died recently at the age of ninety years, that besides never having used alcohol or tobacco he possessed the more unique distinction of never having taken a dose of medicine during his life.

— The will of Samuel W. Swett, late of Boston, has been filed in the probate court, and contains a large number of munificent public bequests, disposing of some $250,000 in charity. The will is dated December 14, 1880. Medical and hospital interests are generously remembered, as will be seen from the following list: To the Massachusetts Institute of Technology, $10,000; to the old men's home, Boston, $5000,

its corporate name being the Home for Aged Men; to the Massachusetts General Hospital, to aid that corporation in building and maintaining a hospital for convalescent patients, under such rules and regulations as the said corporation may think proper to make, the sum of $50,000, and in case the said corporation should not think it expedient to establish such hospital for convalescent patients, the income of the trust fund, or any part, or the whole of the fund itself may be used by said corporation in any manner the said corporation may think best for its interest; to the Boston North End Mission, $20,000; to the Missionary Society of Boston, $10,000; to the Boston Young Men's Christian Association, $5000; to the Young Men's Christian Union, $5000; to the American Board of Commissioners for Foreign Missions, $10,000; to the Provident Fraternity of Churches, $5000; to the Massachusetts Home Missionary Society, $10,000; to the Boston Provident Association, $10,000; to the Boston Marine Society, $10,000; to the Sailors' Snug Harbor, located at Quincy, Mass., $10,000; to the Temporary Home for the Destitute, located at Nos. 1 and 2 Pine Place, $5000; to the President and Fellows of Harvard College, for the use of the Medical Department, $20,000; to the Baldwin Street Home for Little Wanderers, $20,000; to the Boston Children's Aid Society, $5000; to the Children's Hospital of Boston, $10,000; to the New England Hospital for Women and Children of Boston, $10,000; to the Children's Mission for Destitute Children, $10,000.

NEW YORK.

— At the last meeting of the Academy of Medicine, held Thursday evening, June 5th, twenty-four new Fellows were admitted, and the President, Dr. Fordyce Barker (who has just returned from Europe), made an address in regard to the death of the senior ex-president, Dr. Willard Parker, and honorary Fellow, Dr. S. D. Gross. He also alluded in feeling terms to the bereavement of Dr. S. T. Hubbard, whose son, Dr. William H. Hubbard, recently died from disease contracted in the discharge of his duties as one of the house-staff of Bellevue Hospital, and resolutions tendering the sympathy of the Academy to Dr. Hubbard and his family were afterwards passed. Dr. R. W. Amidon then read a paper entitled A Plea for More Heroic Surgical Interference in Affections of the Brain, which was discussed by Drs. Garrish, Noyes, and Putzel, after which a resolution was adopted urging upon Governor Cleveland the signing of a bill recently passed by the Legislature, which provides for the purchase of suitable lands for a number of new parks in the upper part of the city. The Academy then adjourned to meet on the first Thursday in October.

— A clergyman temporarily residing in the city was summoned last week to appear in the Yorkville police court on the complaint of the Society for the Prevention of Cruelty to Children that he had permitted his daughter, a child six years of age, who had fractured her arm, to remain without medical attendance. He was a firm believer in the "faith cure," but when he learned that the Society was about to proceed against him he secured the services of two surgeons, and when he appeared in court was armed with a certificate that the child was being properly cared for, in consequence of which the complaint was dismissed.

— Dr. Thomas C. Chalmers, an old and highly respected physician of New York, died June 4th of uræmia, the result of cystitis and pyelitis. He was born at West Galway, Saratoga County, N. Y., in 1810, and was graduated with high rank from Union College in 1831. He received the degree of M. D. from the College of Physicians and Surgeons, New York, and was one of the original founders of the Academy of Medicine, of which he remained a Fellow up to the time of his death.

— The trial of James Brown, an ex-attendant, charged with manslaughter in the first degree for causing the death of Evan D. Hughes, a patient in the State Lunatic Asylum at Utica, in January last, was concluded on the 4th of June, resulting in the conviction of the accused of manslaughter in the second degree.

— The new buildings presented to the German Dispensary by the late Mrs. Oswald Ottendorfer were formally opened on the 24th of May. The principal address was delivered by Dr. A. Jacobi.

PHILADELPHIA.

— On Thursday evening, June 5th, a complimentary dinner was given by the profession of Philadelphia to Prof. Alfred Stillé in commemoration of his retiring from the chair of practice of medicine in the Medical Department of the University of Pennsylvania, a position from which he resigned at the close of the last session, after twenty years' service. Among the guests present were Dr. Stillé's life-long friend, Dr. F. C. Shattuck, of Boston, who shared his studies in Paris, Surgeon W. S. W. Ruschenberger, medical director United States Navy, now retired, Dr. Austin Flint, of New York, Surgeon J. S. Billings, United States Army, of Washington, and Traill Green, of Easton, Pa. Professor DaCosta presided in the place of Professor Gross, whose death had occasioned a postponement of the supper from the first time appointed. Seventy-seven covers were laid, and nearly all were present, including Drs. Agnew, Bartholow, Pepper, Brinton, Solis Cohen, Pancoast, Parvin, Tyson, H. C. Wood, J. Ashhurst, Hutchinson, Hays, C. Wilson, J. C. Wilson, S. Lewis, and many other prominent members of the profession. Addresses were made by Drs. DaCosta, Stillé, Shattuck, Billings, Pepper, and Flint. Letters of regret were received from Prof. Oliver Wendell Holmes, of Boston, John L. Atlee, of Lancaster, A. G. Moses, of St. Louis, Henry I. Bowditch, of Boston, and Edward Hartshorn, of Philadelphia. During the evening the chairman presented to Dr. Stillé an album containing the autographs of those present at the dinner. The whole affair was a memorable one, and was heartily enjoyed by all.

— Dr. William Pepper, formerly professor of Clinical Medicine, has been appointed to the vacant chair of

Practice of Medicine in the Medical Department of the University of Pennsylvania.

— Professor Gross having bequeathed his library to the Academy of Surgery of this city, it is understood that the bequest will be accepted, and a special deposit made of the books with the College of Physicians, where the Academy holds its meetings.

— At the June meeting of the College of Physicians, Dr. DaCosta took his seat as President, and in a few words thanked the College for the honor conferred. Dr. S. Weir Mitchell was unanimously elected Vice-President.

— At the quarterly meeting of the Philadelphia County Medical Society, held June 5th, an amendment made with a view of keeping out women candidates, by declaring that the Society shall consist of "male" members, was lost, having failed to get a two-thirds' vote. But a woman candidate was defeated as usual.

— The Point Airy Sanitarium, a health resort or park on Windmill Island, situated in the Delaware River, opposite the city, was opened June 5th. It was designed by some charitable persons with the object of providing some fresh air for poor children during the heated term, the temperature being much lower than in the city. There is no provision for keeping visitors over night, except in the little hospital, but a small steamer is owned by the Association, which plies back and forth all day long. From 1200 to 1400 persons can be accommodated every day. Last year 49,000 visitors were admitted. Some nourishing articles of food, sick diet, tea, etc., are provided for mothers and children, while toys and gymnastic apparatus afford them exercise. This sanitarium at a small expense is of inestimable benefit to the poor of the lower part of the city.

Correspondence.

LETTER FROM LONDON.

THE INTERNATIONAL HEALTH EXHIBITION.

LONDON, *May* 22, 1884.

MR. EDITOR, — The 'bus driver, with a bouquet in his button-hole, smilingly shouts to the stream of people pouring down the Strand, "*'ealth Exhibition, sir;*" the conductor says, as one passes up to amuse himself gazing at the human comedy from the top of his stage, "*Fine day, sir, for the four-in-'and meet, sir, at 'yde Park, sir, eleven o'clock, sir.*" John Bull instructing himself and John Bull amusing himself, both very serious matters, not to be treated lightly, and about which there must be no unnecessary waste of time or nonsense.

The horses were magnificent. A crowd is always interesting. The riding was some good, some bad, some very bad. The faces and figures of the ladies driving and on horseback, much to our surprise, were not so suggestive of health and strength as the general appearance of the corresponding class on the Mill Dam and the Brighton road, although the opposite was true of the thousands on foot.

Ten thousand people visit the Health Exhibition daily, attracted partly by the promenades in the charming gardens, illuminated at night, by the bands of music, the playing of the great organ in the Albert Hall, and the very entertaining and instructive historical representations of early costumes and models of the houses of London of past centuries. It is more than a health exhibition. It is a great and amusing six-months' show, at which the populace can divert itself, and at the same time learn an immense deal with regard to the economies, the conveniences, the elegances, and, so far as health is concerned, the necessities of the school, the workshop, and the household. It has a room where useful lessons are given in cookery, and cheap dinners may be studied practically; but the "first-class restaurants" are, to use a favorite English expression, nasty, — a serious fault in the eyes of those people who think that all this talk about filth-diseases and cleanliness has some influence in diminishing death-rates, but an immense value as a civilizing agent. For popular instruction the whole affair is admirably arranged, but the student of sanitary science will not find enough to repay him for the sacrifice of much time in getting there, except in so far as he is interested in the devices of the various manufacturers and shopkeepers for applying sanitary principles to the daily uses of life, all of which is to be learned chiefly from the exhibitions and advertisements of their wares by some sixteen hundred business firms, some of whom announce to the nobility and gentry the great things that they can do if you give them a chance. At lunch our eyes rest upon walls covered with convenient advice to go to Peter Robinson's for the newest fashions, with enticements to drink non-alcoholic, sparkling morella, a substitute for wine, or zoedone at lemonade prices, until we see that *The Lancet* has analyzed Camuset's champagne, and gives it unqualified praise, but we look in vain for the wonders that Eno's fruit salts can perform.

In the food department there are raw materials and machinery in motion to show the various processes of making them eatable; preserved provisions of all kinds; the processes of the dairy, from the gentle cow in the stall to the pretty dairy-maid patting the butter; every sort of drink, alcoholic and otherwise; diets for invalids and infants; methods of cooking, including bakeries, and the possible dangers to health from their mismanagement; adulterations; parasites found in meat; methods of preserving food; tobacco.

The relative values of different articles of dress, especially of underclothing, as to the various requirements of health and comfort, in different climates, and for all sorts of purposes; the effects of poisonous dyes, the costumes suitable for female operatives, for different trades and workshops, for nurses, soldiers, sailors, firemen; illustrations of badly-shaped boots, and spinal and thoracic deformities from tight lacing; the processes of manufacture of clothing, — all are admirably shown; but it is safe to say that the latest fashion of the returning narrow corsets in the displays from Regent Street will make more impression on the average young woman than the pictures of the squeezed livers.

Among the other departments the most important are water supply and drainage of the dwelling-house, illustrated admirably to the least detail, and especially with two dwellings, one to show bad and the other good sanitary arrangements; construction and fittings of the dwelling-house, including fabrics for such use, wall papers free from arsenic, etc.; heating, lighting,

ventilating, and smoke abatement in dwellings, very fully treated; school hygiene, desks, and methods of instruction; ambulance equipments; workshops; the meteorology of health; demonstration in the laboratory of methods of examining food, air, water, soil, constructive materials of houses, disinfectants, etc.

There are to be conferences in the leading scientific societies, open to the visitors to the exhibition, on the subjects of dwellings for the poor; domestic sanitation in the urban and rural districts; industrial diseases; how infectious diseases are spread; notification of infectious diseases; disposal of the dead, cremation; meat supply; water supply and distribution; construction of houses with regard to sanitary arrangements; oral instruction of the deaf and dumb; electric lighting, municipal and domestic, or on other subjects connected with application of electrical science; food adulteration and analysis; sanitary legislation; some subject cognate to the work of the Society; the effect on the health of teachers and children of overwork in schools; ambulance work in peace and war; bee-keeping; tropical sanitation. Shilling handbooks are on sale throughout the exhibition by competent, many of them by eminent, writers on Healthy Villages, illustrated. Healthy Bed-Rooms and Nurseries, including the Lying-in Room. Healthy and Unhealthy Houses in Town and Country, illustrated. Healthy Furniture and Decoration, illustrated. Healthy Schools. Health in Workshops, illustrated. Manual of Heating, Lighting, and Ventilation, illustrated. Food. Principles of Cookery. Food and Cookery for Infants and Invalids. Alcoholic Drinks. Water and Unfermented Beverages. Fruits of all Countries, illustrated. Salt and other Condiments. Legal Obligations in respect to Dwellings of the Poor. "Our Duty," or Moral Responsibility of the Individual in regard to Health. Laboratory Guide to Public Health Investigation, illustrated. Physiology of Digestion and the Digestive Organs, illustrated. Fermentation. Spread of Infection. Scavengering and other such Work in Large Cities, illustrated. London Water Supply. Fires and Fire Brigades, illustrated. Athletics, Part I., illustrated. Athletics, Part II. Dress in relation to Health and Climate, illustrated. Accidental Injuries, their Prevention and First Management, illustrated. The Ambulance, illustrated. The Influence of Schools of Art on Manufacturing Industry. * * *

"THE 'TAXATION' THEORY OF EXPERT TESTIMONY."

Boston, *June* 9, 1884.

Mr. Editor, — Having read with great pleasure the article in your journal of June 5th on The "Taxation" Theory of Expert Testimony, I am tempted to express the opinion that not only is it, as you say, a greater injustice to call upon experts upon the same terms as are jurymen, and that they should rather be considered as officers of the court as are judges and sheriffs; but I would go farther, and maintain that the only excuse for not treating jurymen in the same way is the assumption that it is impracticable; in short, that it is a very high-handed act to force any man to serve the State in any capacity whatever in opposition to his own interests or wishes. Such an act may be excusable when our limited knowledge shows us no alternative; but while this consideration may, perhaps, be an excuse for conscription or for the drawing of juries, yet imperfections of civilization ought not to be pleaded when they do not exist, and there is certainly no necessity for compelling the services of experts. If there were, the least that could be done in honor would be payment for services at the market value. For my own part I can see no other ground that is not simply communism. Very truly yours, E. M. B.

RETAINED PLACENTA OF ABORTION, WITH HÆMORRHAGE.

Brighton, *June* 5, 1884.

Mr. Editor, — The practice which has been successful and satisfactory in the abortion cases that have fallen into my hands for the last fifteen years is, first, to stop the hæmorrhage, which is the one alarming symptom in nine cases out of ten which occasions the calling of the physician; and the most certain, sure, and effective way of doing this is to remove at once the placenta manually. If this is done the hæmorrhage ceases, the danger from septicæmia is practically nil, and, until this is done, "the anxious days,' and nights too, are a certainty; frightful hæmorrhages may, and in a certain per cent. of cases do, occur. In other cases the placenta is retained from inability of the uterus to throw it off, and putrefaction commences with its attendant danger of septicæmia. Many cases left to nature come out all right of themselves; but these last are not those that come under the observation of the physician.

Early in my practice I concluded, when an abortion was so far in progress that the fœtus had escaped, that the safest, most satisfactory, and common sense practice was to complete the abortion as quickly as possible. The deaths from abortion are mostly from effects of hæmorrhage and septicæmia. Any delay, therefore, in the removal of the placenta make "the anxious days" certain to come, provoke the occasion of hæmorrhage, and the possibility of attacks of septicæmia. With the complete removal of the secundines all apprehension from hæmorrhage and septicæmia is at an end.

In the treatment of disease if the cause is removed the disease is often soon cured. In abortion the hæmorrhage is due to the retained placenta. Septicæmia after abortion is caused by the retained placenta, or a portion of it. The most scientific treatment, then, of retained placenta after abortion, with resulting hæmorrhage or septicæmia, would seem to be its immediate removal, and in my experience the fingers are the best and only instruments needed. Any other method of treatment is but temporizing; plugging the vagina, by Dr. Lawson Tait, has been styled "barbarous and unscientific." Immediate removal of the placenta is but carrying out the perfect method of nature, which makes the effort in nearly all cases to remove it, and succeeds in most, but in certain of the cases to which physicians are called she fails from lack of expulsive force in the uterus. By her efforts, however, the uterus from being high up is forced down lower in the pelvis, is more easily reached, the os is made softer, more dilatable, and, with the left hand above the pubes, the forefinger of the right hand can be made to reach and remove the placenta in all cases.

Having practiced medicine in a town for seven years, near a successful abortionist, I presume it has

been my lot to see more cases of hæmorrhage and septicæmia after abortion has been procured than usually falls to the lot of the general practitioner; unwittingly I contributed to his success by saving the lives of patients that came into my hands *in extremis*. The conclusions and deductions as above are the result of my experience.

Yours etc., MARSHALL L. BROWN, M. D.

Miscellany.

EFFECTS OF POLITICAL EVENTS ON THE FORMS OF INSANITY.

THE *Medical Times and Gazette* (May 3d) thus summarizes the introductory lecture of Dr. Legrand du Saulle (reported in No. 13 of *Progrès Médical*) at the Salpetrière this year, in which he pointed out that war and rioting only induce insanity in the predisposed. There was no increase in the number of the insane during the troubles that prevailed from 1847 to 1854, and it was the same during the events of 1870 and 1871. In his opinion, speculation, the thirst for gold, and sudden changes in fortune are the chief causes that provoke insanity. The constantly increasing resources of the Assistance Médicale, by enabling it to aid so large a number of patients, have materially influenced the statistics of mental diseases — for formerly a large number of epileptics, imbeciles, and persons suffering from senile dementia, who would have remained unnoticed in the rural districts, are now inmates of asylums. If the events of 1870–1871 have exerted any decided effect on the mental condition of the Parisian population, it is because they modified the conditions of existence. Thus, on the declaration of war, when a considerable number of young persons joined the colors, numerous cases of subacute alcoholism were met with among quite young people, as a consequence of the excesses committed under the influence of the emotion caused by the approaching departure. When the enemy approached, and investment was menaced, the population of the suburbs took refuge in Paris, and these unfortunate beings, in a state of constant anxiety and anguish, insufficiently aided and badly fed, furnished a good many cases of melancholic insanity. Other disturbances arose under the conditions of existence necessitated by the defense. The men passing their time at the fortifications and committing excesses in drink were in large numbers attacked with subacute alcoholism, while the ill-fed women presented the psychical disturbances due to inanition — hallucinations, melancholic delirium, etc. Still, insanity, properly so-called, seemed to have decreased. At the time of the bombardment, the inhabitants of Montrouge took refuge in the other districts, and a great many became subjects of panophobia or "perplexed melancholia," several of the women presenting, without any period of invasion, the phenomena of melancholia with stupor or stupidity. During all this period the epileptics in the Salpetrière underwent no increase in the number of their attacks. One single category of the insane exhibited a notable increase, namely, the *inventors*, who still continued numerous until the period of the Commune. In conformity with the documents on the hereditary and personal antecedents of the subjects of psychical disturbances during this period the existence of obsidional insanity cannot be admitted.

The pathogenic influence of the events of the siege was not only felt among adults, but was also very marked on the development of infants conceived at this epoch. The numerous disturbances in their evolution observed among infants born in the later months of 1871, and the exceptional mortality which occurred amongst them, caused them to be designated by the working population as *les enfants du siège* — a name synonymous with an ill-formed infant destined to a fatal lot. Among ninety-two infants conceived during the siege, Dr. Legrand du Saulle found that in sixty-four there were physical, intellectual, or moral anomalies, the remaining twenty-eight being in general small and sickly. As to the pathogenic influence under which these anomalies are developed, that must be a complex one, the principal elements of which are alcoholism, inanition, and the psychical condition determined by the moral shock under circumstances so eminently dramatic.

INSTITUTION FOR FEEBLE-MINDED CHILDREN IN PENNSYLVANIA.

AT a meeting of the Board of Directors of the Pennsylvania Institution for Feeble-Minded Children, held lately at Elwyn, the condition of the feeble-minded children of the State was discussed. The census of 1880 reports the feeble-minded population of Pennsylvania to be 6503. Of this number 2323 are under eighteen years of age. The correspondence of the institution establishes the fact that at least 1500 feeble-minded children are in the homes of persons too poor to pay for their support in any institution, and yet too much attached to their unfortunate offspring to place them in county almshouses. The injury to the community from the presence of this element is such that those who examine this problem believe it would be wise economy to isolate the feeble-minded and idiotic, and establish in Delaware County, in connection with the present institution, an asylum village, to consist of farm-houses for those who are able to work, a hospital home for the helpless, and a central educational department. The institution already embraces these features, and by utilizing its farm lands the cost of maintenance has so diminished that it is now believed a plan embracing all this dependent population of the State is feasible.

ANOTHER PREHISTORIC HUMAN SKELETON.

IN *Science* (May 2, 1884) we find figures illustrating the skull from a skeleton which was found about a month ago in one of the grottoes at Mentone, France (next to the one in which a skeleton was found some twelve years ago by Rivière). The description was forwarded by Mr. Wilson, the United States consul at Nice, under date of March 31st. The skeleton was found in a cavern at a depth of eight and a half metres, under well-defined strata; one a metre and a half thick composed of cinders, ashes, burnt earth, and charcoal. More or less worked flint chips were found with it comparing well with those found with Rivière's skeleton.

The skeleton was complete; but, as the result of a quarrel over the ownership, the body was stolen, and its whereabouts are still unknown. The skull was broken in the exhumation, but is nearly perfect; and, when found, a large chip flint was found resting against

the top of the head, and two others resting like epaulets against the shoulders. The length of the skull, from the back of the head to the forehead, was eighteen centimetres, and from the back of the head to the projecting eyebrows, nineteen centimetres and a half; the breadth was fourteen centimetres. One femur was saved from loss, and measured forty-nine centimetres in length.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 31, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Measles.
New York	1,340,114	603	253	24.31	15.47	4.59	6.46	4.08
Philadelphia	927,995	366	127	16.74	12.42	—	2.70	1.89
Brooklyn	644,526	—	—	—	—	—	—	—
Chicago	632,100	263	132	28.50	19.50	9.00	10.50	15.75
Boston	423,800	177	60	17.36	14 56	3.36	5.04	—
Baltimore	408,520	142	59	15.40	13.30	6.30	.70	2.10
St. Louis	400,000	91	29	17.60	14.30	2.20	5.50	1.10
Cincinnati	272,400	75	22	7.98	15.96	2.66	—	—
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	69	12	15.95	24.65	4.25	1.45	1.45
Pittsburg	180,000	57	28	17.54	12.25	—	5.25	5.25
Milwaukee	142,400	50	29	20.00	2.00	8.00	2.00	2.00
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	18	5	11.11	5.55	5.55	—	—
Nashville	54,400	23	7	8.70	8.70	—	4.35	—
Charleston	52,286	30	18	23.33	16.66	23.33	—	—
Lowell	71,447	22	7	9.11	13.65	—	4.55	—
Worcester	69,442	22	9	22.75	13.65	—	18.20	—
Fall River	62,674	15	3	13.33	6.66	—	13.33	—
Cambridge	60,995	16	4	12.50	25.00	—	12.50	—
Lawrence	45,516	10	5	30.00	10.00	—	20.00	—
Lynn	44,895	11	3	18.18	18.18	—	—	—
Springfield	38,090	7	0	—	14.28	—	—	—
Somerville	31,350	11	4	18.18	18.18	—	—	—
Holyoke	30,515	12	5	33.33	8.33	8.33	8.33	—
New Bedford	30,144	8	2	—	25.00	—	—	—
Salem	29,503	10	3	10.00	10.00	10.00	—	—
Chelsea	24,347	8	2	—	12.50	—	—	—
Taunton	22,693	1	1	—	—	—	—	—
Gloucester	21,400	1	1	—	—	—	—	—
Haverhill	20,905	9	2	22.22	22.22	11.11	11.11	—
Newton	19,421	6	2	—	—	—	—	—
Brockton	18,323	3	0	—	—	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	4	0	—	50.00	—	—	—
Fitchburg	13,433	6	2	—	16.66	—	—	—
Eighty Massachusetts towns	312,595	78	13	14.08	28.16	10.24	10.24	—

Deaths reported 2205 (no reports from Brooklyn, Buffalo, and Providence): under five years of age, 917; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 467, consumption 337, lung diseases 230, diphtheria and croup 101, diarrhœal diseases 90, measles 68, scarlet fever 67, typhoid fever 36, whooping-cough 31, cerebro-spinal meningitis 22, malarial fevers 22, erysipelas 11, puerperal fever 10, small-pox nine. From *scarlet fever*, Philadelphia 22, Chicago 13, New York 11, Boston six, St. Louis and District of Columbia four each, Baltimore two, Cincinnati, Pittsburg, Milwaukee, New Haven, and Worcester one each. From *typhoid fever*, Philadelphia 14, New York six, Chicago four, Boston three, New Orleans, and Holyoke two each, Baltimore, District of Columbia, Pittsburg, Milwaukee, and Nashville one each. From *whooping-cough*, New York 14, Boston five, Philadelphia three, Baltimore New Orleans, and Pittsburg two each, Chicago, St. Louis, and Somerville one each. From *cerebro-spinal meningitis*, New York four, Chicago five, Philadelphia three, Baltimore and Lawrence two each, St. Louis, Cincinnati, Milwaukee, Somerville, Stoneham, and Leicester one each. From *malarial fevers*, New Orleans 10, New York seven, Chicago and St. Louis two each, Baltimore one. From *erysipelas*, New York seven, Philadelphia two, Chicago and Cincinnati one each. From *puerperal fever*, Chicago and Boston two each, New York, Baltimore, District of Columbia, Milwaukee, Lowell, and Westford one each. From *small-pox*, New Orleans seven, Philadelphia and Cincinnati one each.

In 100 cities and towns of Massachusetts, with an estimated population of 1,378,000 (estimated population of the State 1,955,104), the total death-rate for the week was 16.50 against 14.86 and 15.88 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending May 17th, the death-rate was 21.1. Deaths reported 3540: acute diseases of the respiratory organs (London) 295, whooping-cough 182, measles 151, scarlet fever 70, small-pox (London 30, Liverpool five, Sheffield and Hull three each, Sunderland and Newcastle one each) 43, fever 35, diarrhœa 35, diphtheria 23. The death-rates ranged from 16.2 in Brighton to 27.5 in Manchester; Sunderland 16.5; Bristol 18.6; Sheffield 18.9; Birkenhead 18.9; Leicester 19.6; London 19.9; Blackburn 20.3; Bradford 22.7; Birmingham 22.8; Liverpool 24.3; Leeds 25.5. In Edinburgh 24.7; Glasgow 27.6; Dublin 25.7.

For the week ending May 17th, in the Swiss towns, there were 34 deaths from consumption, typhoid fever 31, lung diseases 19, diarrhœal diseases 16, diphtheria and croup two, measles one, scarlet fever one, whooping-cough one, erysipelas one. The death-rates were, at Geneva 11.2; Zurich 23.6; Basle 17.8; Berne 32.2.

The meteorological record for the week ending May 31st, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
May, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 25	29.937	57	73	51	72	80	93	82	NW	SE	SE	8	11	2	C	C	C	—	—
Mon., 26	29.956	51	57	49	91	88	98	92	SE	SE	SE	4	11	3	F	F	F	—	—
Tues., 27	29.822	53	62	48	96	89	100	95	NW	SE	SE	3	10	5	O	O	G	—	—
Wed., 28	29.849	50	59	44	99	100	94	98	SW	N	N	6	16	13	T	R	O	—	—
Thurs., 29	29.963	45	56	40	65	86	75	75	NW	NW	NW	14	10	9	C	O	C	—	—
Fri., 30	30.051	45	53	35	64	36	70	57	NW	W	SW	9	11	3	C	F	C	—	—
Sat., 31	30.271	52	65	39	84	66	79	76	W	SE	W	9	15	8	C	F	C	—	—
Mean, the Week.	29.978	50	61	44				80										14.05	0.85

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM MAY 31, 1884, TO JUNE 6, 1884.

MOORE, JOHN, lieutenant-colonel and assistant medical purveyor. Ordered to perform, in addition to his present duties, those of medical storekeeper, San Francisco, Cal.

JOHNSON, HENRY, captain and medical storekeeper. Relieved from duty at the medical purveying depot at San Francisco, Cal., and ordered to report for duty at the medical purveying depot, New York City, relieving Captain Andrew V. Cherbonnier, medical storekeeper.

CAPTAIN CHERBONNIER, on being relieved by Captain Johnson, will proceed to St. Louis, Mo., and report in person to Captain George T. Beall, medical storekeeper, and acting assistant medical purveyor, for duty at the purveying depot at St. Louis, relieving Captain Beall of his duties as medical storekeeper.

Paragraph 9, S. O. 128, A. G. O., June 3, 1884.

FRYER, BLENCOWE E., major and surgeon. Granted leave of absence for one year from July 1, 1884. Paragraph 7, S. O. 128, A. G. O., June 3, 1884.

HALL, JOHN D., captain and assistant surgeon. Granted leave of absence for three months, to take effect on his arrival at St. Paul, Minn. Paragraph 8, S. O. 128, A. G. O., June 3, 1884.

HEGER, ANTHONY, major and surgeon. Assigned to duty at Fort McHenry, Md., as post surgeon. Paragraph 1, S. O. 108, headquarters Department of the East, June 2, 1884.

BAILY, JOS. C., major and surgeon. Now on leave of absence, is relieved from duty in Department of Texas, and ordered to report to commanding general, Department of the East, for assignment to duty at Fort Monroe, Va., to relieve Lieut.-Col. Charles Page, surgeon U. S. Army, on July 1, 1884, from duty at that station.

LIEUT.-COL. PAGE, on being relieved by Major Baily, will proceed to Fort Leavenworth, Kans., and report to commanding general, Department of the Missouri, for assignment to duty as medical director of that department.

Paragraph 12, S. O. 125, A. G. O., May 29, 1884.

WRIGHT, J. P., major and surgeon. Directed to perform, temporarily, in addition to his other duties, those of medical director, Department of the Missouri. Paragraph 2, S. O. 107, headquarters Department of Missouri, May 28, 1884.

HUNTINGTON, DAVID L., major and surgeon. During the absence of the Surgeon-General directed to take charge of the office of the Surgeon-General and perform his duties. Paragraph 6, S. O. 129, A. G. O., June 4, 1884.

BENTLEY, EDWIN, major and surgeon. Assigned to duty at Fort Clark, Texas, as post surgeon. Paragraph 1, S. O. 68, headquarters Department of Texas, May 31, 1884.

KOERPER, EGON A., captain and assistant surgeon. Assigned to duty at Fort Keogh, M. T. Paragraph 1, S. O. 58, headquarters Department of Dakota, May 27, 1884.

BARNETT, RICHARDS, captain and assistant surgeon. Now on sick leave of absence, is relieved from duty at Columbus Barracks, Ohio, and ordered to report to commanding general, Department of the East, for assignment to duty. Paragraph 2, S. O. 129, A. G. O., June 4, 1884.

MIDDLETON, PASSMORE, captain and assistant surgeon. Granted leave of absence for one month on surgeon's certificate of disability. Paragraph 2, S. O. 107, headquarters Department of Missouri, May 28, 1884.

WILSON, GEORGE F., first lieutenant and assistant surgeon. Relieved from temporary duty at Fort Canby, Washington Territory, and ordered to return to his proper station (Fort Walla Walla, Washington Territory). Paragraph 2, S. O. 70, headquarters Department of Columbia, May 26, 1884.

OWEN, WILLIAM O., JR., first lieutenant and assistant surgeon. Having reported at these headquarters, in compliance with paragraph 5, Department Special Orders, No. 62, current series, will return to, and take station at, Fort Stevens, Oregon.

In addition to his duties at Fort Stevens, Assistant Surgeon Owen will perform those of medical officer at Fort Canby, Washington Territory. Paragraph 1, S. O. 70, headquarterss Department of Columbia, May 26, 1884.

LIST OF OFFICIAL CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JUNE 7, 1884.

MURRAY, T. M., passed assistant surgeon, detached from U. S. S. Passaic, ordered to U. S. S. Constellation.

MARTIN, W., assistant surgeon, detached from U. S. S. Constellation, ordered to U. S. S. Passaic.

CRAIG, T. C., passed assistant surgeon, detached from U. S. S. Minnesota, ordered to U. S. S. Vandalia.

DEANE, C. W., passed assistant surgeon, detached from U. S. S. Vandalia, ordered to U. S. S. Minnesota.

HALL, T. H., passed assistant surgeon, detached from U. S. S. Minnesota, ordered to Naval Hospital, Brooklyn.

WALES, P. S., medical director, to continue present duty until August 1, 1884.

WELLS, H. M., surgeon, to temporary duty at Naval Laboratory.

MARSTELLER, E. H., passed assistant surgeon, detached from U. S. S. Vermont, ordered to U. S. S. Monongahela.

SCOTT, H. B, assistant surgeon, commission to date from July 11, 1883.

MEANS, V. C. B., assistant surgeon, commission to date from June 3, 1884.

HESLER, F. A., assistant surgeon, commission to date from June 3, 1884.

RHODE ISLAND MEDICAL SOCIETY. — The seventy-third Annual Meeting of the Rhode Island Medical Society will be held at ten o'clock A. M., Thursday, June 19, 1884, in Lyceum Hall, 62 Westminster Street, Providence. The Annual Address will be delivered by George I. Chace, LL. D., at one o'clock, P. M. Tickets to the Annual Dinner, which will be served at the Narragansett Hotel, can be obtained of the Treasurer, Dr. C. H. Leonard. The Board of Censors will meet in the Medical Library, 54 North Main Street, Providence, at ten o'clock, A. M., on Tuesday, June 17th, and in Lyceum Hall on the morning of the Annual Meeting.

GEORGE D. HERSEY, *Recording Secretary.*

Original Articles.

SEWAGE SYSTEMS AND THE EPURATION OF SEWAGE BY IRRIGATION AND AGRICULTURE.[1]

BY HENRY J. BARNES, M. D.

MANY of the cities and towns of Massachusetts, as well as those throughout the country, have in the near future this question to dispose of in a scientific and practical manner. Political economy and the public health demand already in many communities attention to this subject. An epidemic of typhoid fever in a neighboring town would be a very dangerous menace to the health of the citizens of Boston in consequence of the water supply of the latter being the receptacle for the drainage and dejections of the inhabitants of the former. A beautiful lake in the vicinity of Boston is made so filthy by a large sewer discharging in it, that twice a public cry of reprobation has been raised against it. The valley of one of our large rivers has been rendered almost uninhabitable by the drainage of a large inland city. It is now said that the citizens of Chicago are much of the time drinking their own sewage as a result of taking water from a lake with which their sewerage system connects, and we may add that the city which is not troubled by its system of drainage is the exception and not the rule.

The effects of pollution by sewage of wells, springs, rivers, and ponds used for domestic purposes, are so generally recognized that no attempt is made to collate the many, many calamities which have befallen cities, towns, villages, and families through ignorance or indifference as to what disposition is made of the refuse matter of dwellings, and we must also acknowledge that a comprehensive system of disposing of sewage must be inaugurated in the near future, both in towns and by every individual hamlet. The present methods of gathering in cess-pools or subterranean channels, which discharge in a manner to jeopardize health and comfort of ourselves and neighbors, must be abandoned for a system which shall dispose of and purify the sewage in a practical manner, or we must give up some of our large rivers for sewerage systems, or construct at enormous expense metropolitan systems, both of which have proved unsatisfactory or failures in Europe.

London's metropolitan system, which discharges in the maritime Thames about twenty-one miles below the city, of which so much was expected, and cited as an example Boston might imitate, has proved far from what was anticipated. The sewage instead of going to sea, or being diluted to an extent which would render it innoxious, is deposited by the tides above and below the mouth of the sewer in such a quantity as to cause a great cry of indignation from the inhabitants living along the banks of the river, and numerous petitions to Parliament asking for relief have been presented.

Torquay and Brighton draining directly into the sea have experienced similar results, and their systems are pronounced failures. The once beautiful bay of Naples is to-day a reeking pool of filth. A recitation of the many examples of pollution of rivers both in Europe and America, and the attendant evil, is unnecessary, but the following list of English cities where the courts have enjoined drainage in rivers suggest what we may anticipate in this country; Banbury, Blackburn, Chorley, Doncaster, Harrowgate, Leamington, Merthyr-Tydfil, Rugby, Tunbridge Wells, Warwick, Kendal, Birmingham, Bolton le Moors, Bradford, Coventry, Leeds, Halifax, and Rochdale.

In 1870 the Royal Commissioners reporting on the pollution of the Mersey and the Ribble stated that "sewage discharged in running water is not materially changed for many hours by oxidation." This they demonstrated by the following experiment: A volume of filtered sewage from a drain of London was mixed with nine parts of pure water. Analysis of this mixture showed it to contain per 100,000 parts 267 parts of carbonaceous matter and .81 parts of nitrogenous matter. It was exposed each day to light and air, shaken and drawn by small siphons in a manner to cause a fall of over three feet from vessel to vessel. At the end of 96 hours there remained 250 parts of carbonaceous matter and .58 parts of nitrogenous matter, indicating a loss of but 17 parts of carbonaceous matter and .23 parts of nitrogenous matter. At the end of 192 hours it had lost but 25 per cent. of carbonaceous matter and 33⅓ per cent. of nitrogenous matter. This experiment was made in a temperature of about 68° F., and designed to show the change likely to take place in the current of a river running at the rate of one mile per hour, and carrying ten per cent. of sewage. They concluded there was not a river in England long enough to dispose of a moderate amount of sewage through oxidation.

I. Babut du Maris says, "it has been proved that the water of rivers do not lose a material amount of azote nitrogen in a run of over three hundred miles. And the Prussian Government has consequently forbidden the pollution of rivers and sea-ports by the discharge of the detritus of cities.

The effects of imperfect sewerage systems are forcibly portrayed in a paper printed in the *Boston Medical and Surgical Journal* of February 22 and March 1, 1883. In that paper Dr. Morton Prince collates many epidemics of typhoid fever for this cause. He says, "it is estimated that in this State (Massachusetts) alone there are ten thousand cases of typhoid each year," and every one knows a large proportion may be fairly charged to defective drainage. How imperfect sewerage causes this disease was well illustrated at Nahant, Massachusetts, in 1881, and thoroughly reported by Mr. Ernest Bowditch. A paragraph from page 246 of the Supplementary Report of the State Board of Health 1882–83 would properly introduce the question discussed in this paper, as the successful epuration of sewage by irrigation and agriculture depends upon where, and to what extent, nature provides in the soil for the elimination of filth. Mr. Bowditch says, after noting the improvement in the sanitary condition of the town the year following the epidemic, "While the conclusions as to soil recovery may be derived from insufficient premises, perhaps calling attention to the subject may lead to the discovery of facts warranting systematic research in this direction that may be of great sanitary value." Dr. Frankland wrote in May, 1881: "There are in nature powerful agents for the destruction of disease. It cannot be doubted otherwise the human race would long ago have been exterminated. The problem is not entirely solved, but experience appears to demonstrate this action on sewage employed in irrigation; for when known to be infected by cholera and typhoid fever in England it has never

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, April 30, 1884.

produced these diseases in the inhabitants living on the sewage farms and consuming the produce."

Many and varied are the systems adopted and methods employed with the object of disposing of sewage. Surface drainage, cess-pools, subterranean drainage, and the pneumatic system of Liemur, are employed for collecting and discharging in rivers, ponds, bays, oceans, and on the land are the most common means of distribution. Filtration, precipitation, the employment of chemical agents, irrigation, and agriculture are some of the measures adopted for this purpose of epuration.

CESS-POOLS.

Depositing sewage in cess-pools is one of the most common as well as antiquated methods employed. They are emptied at intervals varying from one week to five or more years. It involves the concentration of fermentescible matter and the consequent generation of gases dangerous to health, beside the vitiation of subsoil water. The soluble organic matter contained in them is capable of very long journeys under ground, with the loss of coloring matter only, as many analyses have proved. Their use should not be tolerated, except the walls are made impervious to liquids, and their being emptied at short intervals. A writer on the subject says: "The time is not far distant when they will be pronounced a relic of barbarism."

DOWNWARD INTERMITTENT FILTRATION PRACTICED AT KENDAL, ENGLAND.

The population is about 14,000. There are 450 water closets connected with the sewers, which discharge 868,000 gallons per day. A reservoir of deposit was first constructed, which overflowed on a farm of about fifteen acres, with the object of utilization by agriculture. The area of the farm proved insufficient to epurate the sewage completely, and five acres of filter beds were added. These, with the farm, suffice to purify the water. In 1875 the products of one third of the farm, consisting of cabbages, beets, celery, and rhubarb, sold for $500. Oats and rye on another third $375, and on the remaining five acres $225 worth of hay was raised, making a total of $1100 worth of produce from fifteen acres. The application of the sewage cost $550.

The operation of the same system constructed by I. Bailey Denton at Abingdon, Great Malvern, and Halstead, England, and at Forfar, Scotland, has proved satisfactory, inasmuch as sufficient matter is eliminated to allow the effluent discharge into neighboring rivers, although it contains a large amount of putrescible matter, as indicated by analyses. It just escapes the ban of the Pollution Act.

THE PNEUMATIC SYSTEM OF LIEMUR

is employed at Amsterdam for a limited number of the inhabitants. The sewer pipes are made of iron, with air-tight joints. An air-pump makes a vacuum. Closets are opened simultaneously once a day in section after section of the city; the contents are drawn to the mouth of the sewer, from which they are carried away in barrels and deposited on the land. Its enormous cost bars its employment where any other system can be used.

UPWARD FILTRATION AT BIRMINGHAM, ENGLAND.

Population about 350,000. Eight thousand water closets are connected with the sewers, which discharge about 14,000,000 gallons per day in the river Tame. An injunction was obtained to prevent the discharge in the river unless the sewage was first purified. A reservoir of deposit was built, and a system of upward filtration, but complaint of the continued pollution of the river necessitated its abandonment. The city then attempted irrigation and agriculture, but this was also enjoined. Finally, after much delay and litigation, the city bought 120 acres of land, and on the advice of an engineer constructed a new reservoir of deposit, where they treat the sewage with lime. To 13,434,860 gallons is added thirteen tons of lime each day. This clarifies the water to a certain extent by causing a deposit of about 300 tons per day, which is carted out and buried on the land.

It has been an easy matter to separate material in suspension from drain water by filtration, but as this represents only about one seventh part of the value of sewage for fertilizing purposes, the process, though simple, has never proved remunerative, and chemists have been employed to suggest agents which would precipitate the soluble matter, which represents six sevenths of the value. Lime has been employed at Tottenham, Blackburn, and Leicester, but the Royal Commissioners report of each a failure, inasmuch as the drain water after being thus treated contains a large amount of putrescible matter.

TREATMENT BY LIME AND CHLORIDE OF IRON AT NORTHAMPTON, ENGLAND.

To 250,000 gallons of sewage is added about 100 quarts of lime and six quarts of chloride of iron, which is thoroughly mixed, and afterwards passed by upward filtration through a layer of calcinated iron eight inches thick. The water comes out without color or odor, and is then allowed to flow into the river. At first there was no complaint, notwithstanding the presence of a large amount of putrescible matter, but later the river became offensive, and the court has enjoined the discharge there.

THE A. B. C. METHOD OF SILLAR.

A mixture consisting of six hundred parts of alum, twenty-five parts of burned clay, one part of blood, ten parts of salt, nineteen hundred parts of clay, fifteen parts of animal charcoal, five parts of magnesia, twenty parts of wood charcoal, ten parts of manganet of potash, two parts of calcined magnesia, is added to the sewage, to be treated in a proportion of about one pound of the mixture to 250 gallons, thoroughly agitated, and then allowed to settle in large reservoirs, which are alternately emptied, and the detritus taken out dried, and sold as a valuable fertilizer. The residuary water still contains putrescible matter, and notably more ammonia than the sewage before being treated.

PRECIPITATION BY CHEMICAL MEANS AT COVENTRY, ENGLAND.

Population 40,000. Five thousand water closets are connected with the sewers, which discharged 2,289,000 gallons of sewage in the river Sherburne. Complaint and litigation was the result. A reservoir of deposit was constructed, after which the sewage was allowed to filter across a gravel bed three feet thick. This proved unsatisfactory, as only solid matter was taken out, and the court again interfered with an injunction. A contract was then made with a fertilizer company, which agreed

to epurate the sewage for fourteen years at $3750 per year, the company engaging to erect building and machinery, and furnish the necessary tools. An extractor first separates the solid matter. The liquid is then run into caldrons under the first group of buildings. Agitators mix impure sulphate of alumine with it at a boiling temperature. It is then run into a second set of vessels, where milk of lime is added and thoroughly mixed, then discharged alternately into four reservoirs in the open air, which are cleaned every fourth day. The liquid thus treated comes out sufficiently pure, and is allowed to filter over about four acres, and finally find its way into the river. Thirty tons of detritus is taken each day from the reservoirs, piled to dry, and subsequently treated by artificial heat. The works are not in operation at night, except the discharge of sewage on the filter beds. Twenty-two tons of coal, one ton of sulphuric acid, nine tons of sulphate of alumine, and four tons of lime are used each week. The company's net loss is about $7500 each year.

After long and costly experiments the greatest chemists have declared that in practice the only manner to epurate sewage is to send it on the land, which eliminates the polluting elements and fertilizing matter for the good of vegetation and the soil. Dr. Angus Smith says: "In all cases the best results are obtained by irrigation." And Dr. Carpenter certifies, in a notice read at the International Congress in 1881, "the only way ammonia could be eliminated from sewage is by irrigation."

A commission appointed by Parliament, composed of Messrs. Dennison, Frankland, and Morton, reported: "The actual resources of chemistry do not permit the hope that the polluting matter dissolved in sewage can be precipitated and sent away by any appliance of chemical reaction, and unless new chemical laws are discovered it is useless to attempt the employment of chemical agents. Epuration must be confided to Dame Nature."

"Millions of dollars have been expended in France in chemical experiments on sewage, all of which have been condemned." *I. Babut du Maris.*

At the Women's Prison in Sherborn, Massachusetts, epuration of sewage is attempted by what is known as Colonel Waring's method. Five acres of land are here employed in the water-shed of Lake Cochituate about two miles from the lake, with which it is connected by a brook, one of the tributaries of Boston's water supply. The sewage is distributed over the land by tile with broken joints laid fourteen inches below the surface, five feet apart. The effluent drainage is provided for by cross sections of tile laid five feet under ground, which, after collecting the water, discharge in the brook. This system is said by the prison authorities to work satisfactorily. "The water coming from the ground is as clear as spring water, and was selected by an expert as such on inspection." This only indicates clarification, and we regret that analyses made were not published, as no one seems to know where they are at the present time. There can be no doubt but the grass, which is the vegetation on the land, takes nourishment from the sewage, for the lines of drain are clearly marked by a better growth directly over them which does not extend to the intervals between. One of the defects of this system has already been experienced. Insoluble matter has filled the interstices between the tile, and prevented fluids from passing through, necessitating their being taken up and relaid. At a depth of fourteen inches the influence of vegetation and the infusoria must be lost on much of the sewage, which was probably disclosed by the analyses, rendering it desirable they should be pigeon-holed. Since writing the preceding, a visit to the prison more than confirms the anticipated objection to the system, and the following analyses, obtained in the office of the State Board of Health, are proof beyond dispute that the system amounts to nothing by way of purifying the sewage; and that the lake is practically a mammoth cesspool, the contents of which the citizens of Boston must drink: —

WOMEN'S PRISON SYSTEM. PARTS PER 100,000.

	Ammo.	Alb. Ammo.	Chlo.	Residue.
Supply End.	.240	.018	9.58	68.5
Flow End.	.232	.034	9.22	69.0

The exclusion of air from the sewage of this system keeps it fresh, the nitrogen is in an organic state, and consequently of no use to vegetation. A fertilizer should become ammoniacal by decomposition before it is capable of assimilation by plants. Analyses of sewage in Europe reveal the fact that there is no loss of fertilizing material in a closed conduit having a run of seven and one half miles. And examinations of the soil of sewage farms show that in all instances the sand one foot below the surface is as pure and white as that where irrigation is not practiced.

In the Mystic Valley the sewage of tanneries has for several years been pumped by the city of Boston into small reservoirs of deposit obviously too small to eliminate even the matter in suspension. From the tank there is an overflow into a shallow ditch several hundred feet long, in which are set several brush dams, after which it discharges into Mystic lower basin. The result of this treatment is to start putrefaction by warmth and free exposure to air, and thus produce a stench which people living in the vicinity claim has greatly reduced the value of real estate. It does not merit extended description as the efforts thus far made merely amount to a flirtation with the subject.

A few of the farmers living along the Blackstone River are beginning to appreciate the valuable fertilizing material conveyed by the current from Worcester, Mass. One farmer states that his meadow lands which were practically abandoned, it not paying to harvest the grass, now produce crops which add several hundred dollars a year to the value of his farm. Others are placing obstructions in the river with the object of turning the water on the land.

During the past ten years sanitarians and engineers have made great progress towards a solution of this question, and it is fair to presume, from the great increase in the number of cities and towns that have adopted irrigation and agriculture as the means of purifying sewage, that this method has proved the most satisfactory. Berlin has two large farms devoted to this object, one of 2035 acres and another of 1818 acres. A great many chemical experiments were tried before the adoption of the present system. They proved very expensive, and none purified the water, although many clarified it. Finally, after experimenting in irrigation and agriculture for eighteen months on a little field of about three hectares (less than seven and one half acres), such favorable results were real-

ized that this system was adopted for the city, — the eminent Virchow working heartily in its favor. At the present time 1067 acres suffice to purify 15,060,000 gallons per day, the drainage of four fifths of the city, containing a population of over 600,000. There is some odor at the opening of the large sewer, but in the fields there is no smell, and the sanitary condition is all that could be desired. There never has been any complaint from the numerous adjoining habitations, and the effluent drain water of the farms is pure and clear, it being impossible to recognize by microscopy or chemistry any influences of the sewage. Vegetables and fruit trees grow luxuriantly on the land, and their roots make a perfect filter. Thirteen and one quarter tons of hay has been cut per hectare (a little less than two and one half acres).

(To be concluded.)

CASE IN PRACTICE. CHRONIC PLEURITIS WITH EXCESSIVE SANGUINOLENT EFFUSION.[1]

BY CHARLES R. CRANDALL, M. D., PORTLAND, MAINE.

MRS. S., aged fifty-eight, of large stature and scrofulous temperament, always had good health until the present illness. When I was first called to see her, which was several weeks prior to the attack now referred to, she complained of difficulty with her breathing accompanied by a cough. Making physical examination of the organs of the thorax I found a localized bronchitis in the posterior lobe of the left lung, in the region of the lower part of the scapula. I noted also that she showed symptoms of marked prostration, and that her digestion was impaired. She was benefited by the treatment instituted, and soon after passed from observation.

In about three weeks I was again summoned, and was informed that she had never fully recovered her strength, although she had followed a course of tonic treatment which I had suggested. She was perceptibly weaker than when I first saw her, and her daughter complained that she was restless, irritable, wakeful, and suffered some from pain apparently due to flatulence. Despite supporting treatment and medication as indicated, she steadily declined in general health for a week or so longer. Finally her daughter informed me that at times her mother seemed a little short of breath, and especially so at night and during the day when she changed her position from the bed to her chair in an adjoining room. Again making a thorough examination I found the kidneys to be normal, but that the quantity of urine was scanty. The liver was also normal so far as could be ascertained. The heart was in a healthy state, but its action was feeble and slightly irregular. The left lung remained in good condition, although the respiratory murmurs were abnormally distinct and percussion resonance intensified. Upon examining the right lung a wonderful revelation was met in the form of an excessive pleuritic effusion, which evidently nearly filled the entire pleural cavity. On auscultation the respiratory murmur was nearly absent in every part of the lung, save some bronchial respiration in the upper portion. On percussion, with the patient in a sitting posture, dullness and flatness were elicited all over the posterior, lateral, and anterior surfaces of the right lung, excepting a small area on the anterior surface above the mammary gland. Vocal fremitus was greatly diminished. The chest was dilated over an inch, but the condition of the intercostal spaces could not be inspected owing to the presence of a thick layer of fat. But the most remarkable feature regarding the excessive effusion thus discovered was the fact of its rapid accumulation without one solitary symptom of chill, fever, pain, or distress calculated to call the attention of either the patient or the physician to the process taking place. The only symptom of a nature to attract attention to the chest at all was some difficulty in breathing, but this was so slight that it resembled the disturbance often noticed in cases of debility, and accompanied by a moderate degree of heart failure.

On the same day that I made the above diagnosis I performed the operation of thoracentesis, assisted by Dr. S. H. Weeks, and removed one hundred and fifty ounces (or over four quarts and a half) of fluid, the color of which was about the shade of a dark, thick port wine. The patient bore the operation without any untoward symptoms, and as the fluid escaped confessed to feeling a sense of relief. Air immediately refilled the entire lung, causing a little pain and slight cough. The respiratory murmur soon became quite normal, while the percussion note was greatly improved.

The fluid proved to be highly albuminous, and when tested by heat it so solidified in the test tube that it had to be broken up to favor removal. Examining the effused fluid under the microscope it was found to contain an abundance of fresh, red blood corpuscles, many of which arranged themselves in rows like rouleaux of coin, while others existed separately, and were shrunken and contracted into angular and star-like shapes. There were also numerous leucocytes having normal characteristics, and a few endothelial cells. Pus was not present, nor were there any indications of an attempt towards organization. The specific gravity was 1022.

REMARKS.

Two months have now passed since I performed thoracentesis upon this patient, and the results have been most gratifying. Effusion recurred slowly to a moderate extent, not sufficient, however, to justify a repetition of the operation. The condition of the lung has remained good, and the general health of the patient has steadily improved. For several weeks she has been dressed and about her house, and of late has done a little work, and gone out of doors.

The foregoing case affords many points of practical clinical interest, but I will avoid trespassing upon the valuable time of the meeting longer than to touch upon a few of the most important.

(1.) It illustrates the inestimable value of thorough investigation. This patient did not have a single sign or symptom well calculated to call attention to the diseased pleura. There had not been any pain, chills, fever, sweats, lividity, or acceleration of pulse. True she had been annoyed by slight failure of breathing upon exertion, but no more than we often see in debilitated patients whose respiration and circulation are practically normal. When I informed her that there was a collection of water in her pleural cavity she ridiculed the idea. Had I taken her word regarding the condition of her thorax, I should have been misled

[1] Read before the Portland Medical Club, April 24, 1884.

in a woful manner. The condition verified the observation of Flint, that chronic pleuritis is often developed imperceptibly, and that it is likely to be overlooked by those who do not employ the physical methods of examination.

(2.) The diagnosis of uncomplicated latent or chronic pleural effusion is easily made when it exists to any extent. The history of the case often aids materially, and especially so if it discloses difficult breathing, insufficiency of breath, a dry, hacking cough, and ill-defined pain or uneasiness in the lower lateral portion of the thorax. Now if to this be added a high-pitched percussion note at the apex of the lung with decided dullness or flatness at the base, feeble, or inaudible vesicular murmur over the portion of the lung, where dullness is most marked, decreased vocal fremitus where the effusion is greatest, and increased percussion resonance on the healthy side, accompanied by a marked accentuated vesicular murmur, a group of ordinary signs and symptoms are met with which are characteristic and unmistakable. Hydrothorax is to be excluded by the absence of cardiac and renal disease, and by the fact that the accumulation is unilateral instead of bilateral; but if doubt exists the introduction of a large-sized hypodermic-syringe needle, or one of the small aspiratory needles, will quickly clear up any obscurity. Exploratory punctures are easily made, and are of great service, for they aid in diagnosticating, convince both the physician and the patient, and display the character of the fluid if any be present.

(3.) Another practical point is that diagnosis should be made early, for the presence of a pleural effusion of any extent is always prejudicial. It deprives the patient of the necessary amount of oxygen, burdens the heart by interfering with the pulmonary circulation, and impairs digestion and nutrition by inducing secondary congestion of the liver and stomach. Moreover, the longer an excess of effusion remains in the pleural cavity the greater the danger of its undergoing degenerative changes and giving rise to empyema. Prognosis is rendered much more favorable by an early detection of the effusion, and a correspondingly prompt treatment. It is the neglected cases which more often give rise to malnutrition and tuberculosis.

(4.) Again this case displays in an impressive manner the great value of thoracentesis or paracentesis as a therapeutical agent. Here was a condition where, in all probability, ordinary absorbent and alterative remedies would have been powerless, owing to the enormous quantity of fluid present, or had they by chance afforded relief it would at best have been a long and wearisome process. On the contrary, this valuable method at once reëstablished normal respiration, and also favored circulation and general nutrition to an extent which soon became very evident. In addition to prompt relief, it promoted the action of remedies to such a degree that permanent improvement rapidly ensued, and reaccumulation was largely prevented.

(5.) In regard to the extreme bloody color of the effusion, it was, to say the least, very suspicious and suggestive. As it began to flow, the first thought was that the aspirator needle had punctured a large blood-vessel or else had wounded the structure of the liver or lung. Immediate examination, however, showed that the needle was properly entered, and that the peculiar fluid was only a highly tinged specimen, and by no means pure blood. The presence of blood under such conditions is ever suggestive of hæmorrhagic effusion due to malignant or tuberculous disease, but the history and symptoms in this instance were not of a character to sustain either theory. On the contrary, it was the opinion of both Dr. Weeks and myself that the presence of blood was due to the state of the patient's system, and to the high degree of congestion of the pleural surfaces. It is not at all impossible that the distention and weight of so much dense liquid favored exosmosis of the blood corpuscles, and ruptured some of the smaller vessels. The remarkable recovery of the patient is confirmatory of the view that the blood effusion did not originate in either tuberculosis or malignant disease.

(6.) Lastly I will say a few words regarding the treatment instituted and carried out after thoracentesis had been performed. As I estimated the case I saw three chief indications for medicinal remedies: —

(1.) To improve digestion and nutrition.

(2.) To promote the action of the heart and kidneys.

(3.) To further absorption by counter-irritation.

In order to meet the first I kept her upon a tonic composed of the fluid extract of cascara sagrada and the tincture of nux vomica given in the elixir of calisaya. I believed that more would be accomplished by stimulating the power and function of her blood-making organs and combating a condition of habitual constipation than by acting more directly upon the entire volume of blood with iron, as is generally advised. Conjoined with these remedies I advised a substantial albuminous diet of milk, eggs, beef, stale bread, and coffee of moderate strength. It is to be ever borne in mind in the treatment of this class of cases that the effusion is highly albuminous, and the demand for a restoration of this vital material to the economy is very great. Excessive waste needs to be counteracted by a corresponding supply.

With a view of stimulating the action of her heart and kidneys, and thereby promoting absorption, I have from first to last maintained the action of carbonate of ammonia given in Trousseau's diuretic wine. Regarding carbonate of ammonia in cases of pleural effusion, Bartholow says that "when an effusion is poured out the only agents which possess the property of resolving it are alkalies, and the most efficient of these is ammonia." The diuretic wine, containing as it does digitalis, acetate of potash, squills, and a mild stimulant, afforded a combination which met well the indication for a heart tonic, diuretic, and alterative.

For counter-irritation, employed with a view of modifying diseased action and furthering absorption, I used a succession of cantharidal blisters over the lower portion of the thorax on the affected side, and also the tincture of iodine. All and all the case is a most satisfactory illustration of the great value of surgical and medical therapeutics.

— A correspondent of the *Medical Record* writes *à propos* of Darwinism and circumcision: "The only explanation I have ever heard given by a scientific man to the fact of Jews continuing to be born with foreskins is the witty repartee, attributed to Professor Huxley, who immediately answered the question, when propounded by a country clergyman, with the quotation, 'There 's a divinity that shapes our ends, rough-hew them how we will.'"

PROGRESS IN DENTISTRY.

BY WILLIAM HERBERT ROLLINS.

A.

1. — DEVELOPMENT OF LOWER JAW.

DR. J. BLAND SUTTON[1] states that the lower jaw is developed from six centres, each one of these corresponding to a separate bone in fishes. The following liable gives the names of the centres of ossification and the corresponding bones in the lower orders: —

Centre of Ossification in Man.	Corresponding Bones in Fishes, etc.
Mento-Meckelian	= Mento-Mechelian.
Angle	= Angular.
Condyle	= Articular.
Coronoid	= Surangular.
Splenial	= Splenial.
Dentary	= Dentary.

In his investigations he took as a guide this rule: "Whenever a nerve passes through a bone it marks the confluence of two or more ossific centres." Applying this to the lower jaw, we have to deal with three nerves: inferior dental, mental, mylo-hyoid. The inferior dental enters the bone by a foramen formed by the union of five ossific plates, the coronoid, condyloid, dentary, angular, and splenial; the nerve then travels in a tunnel formed on the outside by the dentary, and by the splenial on the inner side. The branches which go to the teeth pass up the foramina left between the splenial and dentary plates.

The mylo-hyoid runs in the groove which once lodged Meckel's cartilage.

The mental passes out of the bone through a fenestra formed by the dentary and mento-meckelian ossifications. The paper is too long to give more than a very brief abstract, though it is one of the most interesting investigations of the year.

2. — POLYGNATISM.

Dr. N. Meyer[2] reports a case in a first-born child of healthy parents. At birth there was a swelling about the size of a walnut on the left and outside the normal jaw. As the lower lip was large, a piece was removed eighteen months after birth. The first dentition did not begin till the fifteenth month, but was otherwise normal. At seven years a tooth erupted from the tumor; this was followed by nine others. At the age of fourteen the jaws presented the following appearance: In the upper jaw the teeth were normal. In the normal lower jaw there were four incisors, one canine, two bicuspids, and three molars. The supplementary jaw contained two molars, one bicuspid, two incisors, the other teeth having been extracted.

3. — DOUBLE CLEFT IN PALATE.[3]

The child was four months old. Instead of the ordinary medial fissure there was one on each side. The part between these clefts was one quarter of an inch wide, and extended into the posterior wall of the pharynx, with which it was continuous. The bony septum completely separated the pharynx into two parts. The most probable explanation of this peculiar condition is that the notochord, instead of ceasing at the pituitary fossa, extended further forward, the blastema surrounding it uniting with the plate descending from the coalesced trabeculæ cranii, forming the nasal septum.

4. — UNILATERAL HYPERTROPHY OF LOWER JAW.[4]

The patient was thirty-six years old. The vertical length of right ramus was three inches, that of the left one and a half inches. No cause could be found for the hypertrophy.

5. — EARLY ERUPTION OF MILK TEETH.

Magitot[5] says no interference should be allowed in the case of the early eruption of milk teeth, as in most cases the teeth do regain a certain amount of firmness in spite of their short roots. The only serious inconvenience caused by them is the difficulty of nursing, which may be overcome by artificial teats. A sufficient reason for not extracting is the chance of accidents, particularly of fatal hæmorrhage.

6. — SPONTANEOUS FRACTURE OF THE TEETH.

Several cases have been reported during the year. In each the symptoms have been alike. The patient heard a loud report, as though a gun were fired near the ear. The fractures did not come when the teeth were in use, so that they could not be traced to any hard substance. Various explanations have been given. One writer in describing his case suggests that the explosion was caused by the pressure of gas in the pulp chamber. Colman[6] denies this, as he has seen a fracture of this kind in a tooth with a living pulp. He thinks the cause is calcification in an inflamed pulp. He believes such a pulp is in a condition of tension; when this reaches a point greater than the resistance of the dentine fracture must result.

7. — THIRD DENTITION.

The existence of a third dentition in man has been denied by most writers. A case is reported in the *Dental Jairus* of a man ninety-five years of age who has recently cut nine new teeth, and there is evidence of others not yet erupted.

B.

1. — ORGANISMS PRESENT IN THE MOUTH.

Dr. W. D. Miller gives the following as almost always present: (1.) Leptothrix buccalis. (2.) Vibrio regula. (3.) Clostrydium butyricum. (4.) Mycoderma aceti. (5.) Saccharomyces mycoderma. (6.) Spirochete dentium. (7.) Leptothrix pusilla. (8.) Penicillium microsporum. (9.) Bacterium subtile. (10.) Bacterium termo.

2. — LEPTOTHRIX GIGANTEA.

Dr. W. D. Miller has discovered a new form of leptothrix, to which he has given this name. He has found it in the mouths of cattle, horses, dogs, and hogs. It appears as masses of threads radiating from the point of attachment. The threads are developed from cocci. The older threads are segmented into bacilli and cocci, so that in this fungus there can be no doubt of the connection of these three forms.

3. — RELATION OF FOOD TO TEETH.

Kirk[7] has under his care the teeth of four hundred

[1] British Journal of Dental Science, May 15, 1883.
[2] Archiv für klinische Chirurgie.
[3] Dr. Maylard, in Brit. Jour. Dental Science, page 1144, 1883.
[4] C. Heath in British Journal of Dental Science, page 474, 1883.
[5] British Journal of Dental Science, May 16, 1883.
[6] British Journal of Dental Science, June, 1883.
[7] Independent Practitioner, January, 1884.

children in the Pennsylvania Institute for Deaf and Dumb. He has observed an entire change in the children's teeth when they have been in the institution for a year. The teeth become so hard that it is necessary to retemper the instruments to make them hard enough to cut the dentine in preparing the cavities for filling. The teeth become more firmly placed in their sockets, making extraction difficult. Many cases of spontaneous arrest of caries and of new formation of dentine are seen. These favorable changes are due to the food, which consists largely in preparations of maize, oats, and wheat, from which the layer just under the silicious coating has not been removed in milling. Such grains, therefore, contain a large proportion of bone-forming material. With these coarse foods a liberal supply of milk and a small amount of meat and sugar are given.

4. — CAUSES OF DEGENERATION OF THE TEETH IN THE BLACKS OF THE SOUTHERN STATES.

Dr. A. A. Hilzim[1] attributes this to the change in food and habits since the abolition of slavery. Formerly the negroes lived mostly on corn-meal and meat. To these were added, for breakfast, coffee; for dinner, vegetables. Sometimes wheat flour took the place of corn, but it was ground on the plantation, and not bolted. This food, served at regular hours and combined with plenty of fresh air, exercise, and sleep, made the teeth strong and hard. Now the negroes eat fine white-flour bread, spend a large part of their wages in sweetmeats, eat at irregular times, and sleep too little.

5. — TEETH IN INHERITED GOUT.

Mr. Duckworth,[2] as the result of an examination of three hundred cases, states that the teeth are remarkably large, regular, and strong. They are well enameled and free from decay. The edges of the incisors are not crenated. The color is yellow. The implantation firm. In these cases there is an abundance of tartar. The teeth are usually lost from absorption of the sockets.

6. — TEETH IN DIABETES.

Dr. Magitot[3] says an examination of the mouth always shows a lesion of the alveolar border. This begins by a slight alteration in the position of the teeth. Then follows an alveolar catarrh, which results in a marked absorption of the alveoli, causing the teeth to loosen and drop out, if the patient lives long enough.

7. — TEETH IN LOCOMOTOR ATAXY.

Dr. P. J. Thompson[4] gives the appearance of the teeth and jaws in two fatal cases. In the first case sections of the trifacial nerve near the pons Varolii showed sclerosis; the white substance had disappeared; the axis cylinders were choked in a bed of connective tissue; a few nervous bundles were healthy. In the second case both trifacial nerves were much atrophied, the left one being reduced to a thin gelatinous filament; the Gasserian ganglion on the same side was a flattened band of connective tissue. In both these cases the teeth had been lost, and the jaws presented a senile appearance from the absorption of the alveoli. These changes were thought to be caused by the sclerosis of the trifacial.

1 Southern Dental Journal, March, 1884.
2 British Journal of Dental Science, June 1, 1883.
3 British Journal of Dental Science, page 473, 1883.
4 British Journal of Dental Science, page 18, 1883.

8. — TEETH IN INHERITED SYPHILIS.

A. Fournier[5] defines a syphilitic tooth as one whose development has been arrested in the intra-follicular state by syphilis. The results are arranged under four heads: Dental Erosions, Microdontism, Dental Amorphism, Vulnerability. Dental erosions are of many kinds. They consist of a more or less grooved or pitted condition of the enamel. The most important from a diagnostic point of view is the curved border of the incisors, to which the name of Hutchinson is attached. Fournier does not feel quite sure that other diseases may not cause this. (Magitot, in a paper read before the last International Medical Congress, stated that these grooves were caused by eclampsia.) The other erosures are not of much diagnostic value, as many other diseases may produce them.

Microdontism. This is a diminution in the size of the teeth. It is never a characteristic of the entire denture, and is usually confined to a single tooth standing among well-developed neighbors.

Dental Amorphism. This shows itself in several ways: (1.) Some tooth, a canine for example, takes the form of an incisor. (2.) Additional cusps may appear; the first molar often has a well-developed cusp on the side. (3.) The incisors take the form of axe blades, the crown being much too large for the necks. (4.) One or more teeth lose their characteristic form, and appear as irregular masses of enamel and dentine.

Vulnerability. The statements which the writer makes here are too vague to be of any diagnostic value.

C.

1. — EXTRACTION FOR REGULATING.

It has always been a matter of dispute which teeth should be taken out where room is required in regulating. At almost every dental meeting this subject comes up, and very rarely is anything more reliable than personal opinion advanced. Dr. Perry has attacked the problem in a sensible way, and gives his results in *British Journal of Dental Science*, January 1, 1884. He has tabulated 7277 extractions for disease, and finds that 2823 of these were first permanent molars, 737 were first bicuspids, and 944 were second bicuspids. As the statistics show that more first molars are lost than bicuspids we should, as a general rule, take out the first molar where the choice must be, as is usually the case, between this and a bicuspid.

2. — TRANSPLANTATION OF TEETH.

Dr. Redard read a paper at the last meeting of the French Association for the Advancement of Science, held at Rouen, in which he stated that out of seventy-seven cases seventy-five were successful. The operation is as follows: After extraction hold the tooth in a cold, wet cloth, and cut off the end of the root. Syringe out the socket with a weak germicide; then replace the tooth as soon as possible.

3. — FRACTURE OF JAW.

A curious case is reported in *British Medical Journal* for September 15, 1883. The patient, in falling, struck with his lower jaw a beam, which made a small cut. This was the only evidence of the accident. Two

5 Dental Cosmos, January, February, March, 1884.

weeks later, while eating, he felt as if struck by a blow. An examination revealed a fracture.

4. — NEURECTOMY OF INFERIOR DENTAL.

Dr. Sonnenberg[1] describes a new operation. The patient's head is held firmly back. An incision is begun one centimetre in front of the angle of the jaw. This is carried forward along the edge of the body for four centimetres. The inner surface of the bone is cleaned up to the internal lateral ligament. The insertion of the internal pterygoid is cut; a blunt hook is passed around the nerve, which can then easily be brought to the external opening, and a piece removed. The advantages are: a small wound; the operation is an easy one; there is little bleeding; the capsule of the submaxillary gland is not cut; the wound is a favorable one for healing; and, lastly, the scar is small and not conspicuous.

5. — TRANSFUSION FOR HÆMORRHAGE FOLLOWING EXTRACTION OF A TOOTH.

The patient, a soldier, aged twenty-two. The bleeding was at first slight, but continued all night. Plugging the alveolus, cautery, ergotin. perchloride of iron, ice, and various other things were tried. Ten days after the operation, the patient being almost dead, four ounces of blood were injected into the cephalic vein. The patient rallied, but the bleeding increased. A second transfusion was tried next day. During the operation the heart stopped. The length of time the heart remained quiet is not given. It began again, and from that time the patient made a rapid recovery.

6. — UNITED FRACTURE OF TEETH.

Dr. Van Horne reports[2] a case of fracture of an upper lateral, near the alveolus. A year after the accident the tooth was alive and firmly united.

(To be concluded.)

Reports of Societies.

ONE HUNDRED AND THIRD ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY.

PRELIMINARY DAY.

ON Tuesday, June 10th, as is the custom, the Fellows of the Massachusetts Medical Society were entertained after the manner common to the day preceding that of the annual meeting of the Society.

AT THE HOSPITALS.

At ten o'clock A. M. the Fellows responded to invitations from the Massachusetts General, the City, the new Children's, and the Lying-in Hospitals, at each of which they visited the wards and witnessed certain operative procedures.

At the City Hospital the visitors were shown through the surgical wards, which presented a very attractive appearance. and where were found many cases of unusual interest. The plaster posterior splint so generally used here in treatment of fractures of the leg, and which was the subject of a paper during the afternoon, was found in the various wards in its different applications. One of the cases of interest was a congenital dislocation of the hip in which an attempt is being made to restore the head of the femur to its proper position. At the rear of the main buildings could be seen the tents in process of erection for summer use. In the operating room the femoral was tied for aneurism of the calf by Dr. Homans. Several cataracts were removed by Dr. Wadsworth. Other operations of everyday occurrence were also done. The traumatic surgery of the hospital was exemplified by the case of a boy who had shattered his hand by a cartridge which he had exploded by a hammer. The boy was brought into the hospital during the visit. The application of plaster of Paris to the treatment of club-foot was also shown.

AT THE NEW MEDICAL BUILDING.

At twelve o'clock M., and at the new Harvard Medical building, the Fellows listened to an address by PROF. H. P. BOWDITCH on Methods of Instruction and Research in Physiology, with Demonstrations. Professor Bowditch received the Fellows in the lower lecture room, and there explained the arrangements which adapted the room for experimental lecture courses. Also described the lecture table with its movable central portion which can be wheeled into the physiological laboratory for the preparation of an experiment and be brought into place again for demonstration in the lecture room. A duplicate central portion is similarly used in the chemical laboratory, the lecture room being common to both departments. The fixed portion of the table contains at one end a pneumatic trough, at the other a sink, and is also supplied with gas, water, electricity, and compressed air. The convenience of the blackboards serving also for suspension of diagrams by means of a brass rod at the top and being movable by weight and pulley was explained. A hood revealed by pushing up the blackboards, and useful in experiments which develop unpleasant odors, was shown.

The Fellows being then invited into the physiological laboratory, witnessed experiments connected with original work now in progress and examined the apparatus, which had been arranged for their inspection. The demonstrations were the following: —

(1.) Blood pressure experiment on dog under ether and morphia. Effect of irritation of vagus nerve on rate of heart beat.

(2.) Study of the vaso-motor nerves of cat under ether and curare. Effect of irritation of sciatic nerve on size of leg recorded by means of the plethysmograph.

(3.) The same experiment with frog's legs.

(4.) Demonstration of the action of the semilunar valves of the ox.

(5.) Demonstration of the force of ciliary motion on the mucous membrane of the frog's mouth.

(6.) The effect of changes of temperature on the rate of beat of the frog's heart.

(7.) The phenomenon of subjective complementary motion shown in the after-image of a revolving spiral figure.

(8.) Reaction time studied by means of the pendulum myograph.

(9.) The development of the eggs of the snail studied under the microscope.

(10.) The methods of studying the bacillus of tubercle, with microscopic demonstrations.

(11.) Apparatus for artificial digestion with automatic regulation of temperature.

[1] Medical Times and Gazette.
[2] Items of Interest, February, 1884.

PROFESSOR DWIGHT'S ADDRESS.

Prof. Thomas Dwight then met the Fellows in the anatomical lecture room, and addressed them on Modern Methods in Anatomy, with demonstrations. After an eloquent acknowledgment of the debt which modern anatomists owe to the pioneers of anatomy, Professor Dwight showed how errors still extant in modern works on anatomy are being corrected by the study of the anatomy of frozen subjects. Among others he instanced the position of the stomach, long and generally supposed to be horizontal, but really markedly oblique; also the form and relations of the liver, the shape and relations of the pharynx, etc. He then exhibited very fine frozen sections prepared by himself, and demonstrated the relations of various parts, thus showing the immense value of these sections. Proceeding to say that of all anatomical preparations he considered corrosion and metal methods superior to all others, he exhibited very beautiful examples of these methods, the corrosion specimens having been prepared by himself, and the metal specimens (in which Wood's fusible metal was used) by Dr. Mixter. He also showed a "soft preparation," an arm of the well-known case in which the humerus disappeared. The muscles were still flexible, and color good, although the preparation was made twelve years ago. Glycerine was the principal element in the preserving material. Dr. Dwight advocated this method of preservation for use of teachers.

Following his address Dr. Dwight invited the Fellows to a closer examination of his extremely fine models and preparations. The Anatomical Museum is a handsome room, but, very unfortunately, darkened by the masses of wood-work, in the place of which light iron should have been used.

At three o'clock P. M. the Fellows were called to order in Huntington Hall by President Hosmer to listen to the paper of Dr. George W. Gay, of Boston, on

THE PLASTER POSTERIOR SPLINT IN THE TREATMENT OF FRACTURES OF THE LEG,

and witness its practical application.

After explaining the nature and uses of the splint Dr. Gay, with a corps of assistants, made and applied the same to subjects. The material which forms a basis for the plaster is ordinary gauze. Measurements of the patient's leg having been taken, several thicknesses of gauze are so cut as to fit the leg when applied. The outside layer of gauze is tongued along its edges, and after the plaster paste has been applied and worked into the layers of gauze these tongues are brought forward and lapped over the inside layer, and thus bind the whole firmly together. A roller bandage of soft cotton-flannel having been already applied to the leg of the patient the splint of gauze and plaster is applied over this, its edges being brought from behind forward and lapped over the leg in front until they meet in the median line. An ordinary roller bandage is applied over this, and the splint is complete. Its advantages are (1) that it adapts itself to a rapidly swelling leg, its anterior edges invariably separating in direct ratio with the pressure, and thus need not be removed; (2) that the surgeon can apply it to any form of fracture, and leave it for the night without fear of sloughing or gangrene from unrelieved swelling, etc.; (3) the outer bandage and the splint can be removed without injury to the splint, which can be reapplied as firmly as before by means of straps which buckle; (4) it is a splint always open in front, and never requires to be cut open as in the old form of plaster splint, which often was spoiled during removal.

The Adjourned Meeting.

At four P. M. in the same place the Society held an adjourned meeting in accordance with the vote passed at the last annual meeting. President Hosmer in the chair.

ADOPTION OF THE CODE.

Upon opening the session the President called attention to the fact that the Code of Ethics, although accepted by the Councilors, had never been adopted by the Society, and asked for a motion. It was moved and carried that the Code be adopted.

COMMITTEE ON LEGISLATION.

Dr. H. O. Marcy then offered the ensuing motion: "*Resolved*, That a committee of one from each District Society be appointed with authority to secure from the Legislature an enactment to protect the public from incompetent and irregular practitioners of medicine."

This motion won an affirmative vote.

The Committee appointed is as follows: G. W. Doane, Barnstable; H. M. Holmes, Berkshire; N. Paige, Bristol North; J. Dwelly, Bristol South; W. Cogswell, Essex North; G. Osborne, Essex South; F. J. Canedy, Franklin; W. Holbrook, Hampden; F. Nickerson, Middlesex North; G. J. Townsend, Middlesex South; J. M. Harlow, Middlesex East; J. Stedman, Norfolk; B. A. Sawyer, Plymouth; H. O. Marcy, Suffolk; J. O. Marble, Worcester; J. P. Lynde, Worcester North.

AMENDMENT OF THE BY-LAWS — ADMISSION OF WOMEN.

Dr. H. I. Bowditch then offered this motion: — *Resolved*, That the first four lines of By-law I. be stricken out and the following be substituted: "Candidates for admission into the Massachusetts Medical Society may be either *male* or *female*, and every candidate must by proper credentials and examination satisfy the Censors of said Society that he possesses the following qualifications," etc.

The President at once ruled that this motion was out of order, because at a meeting two years ago the Chair decided that a similar motion might be discussed by the Society, but that no amendment of a By-law could be made until it had been first referred to the Council, and the President was at that time sustained in his decision. Dr. Bowditch's motion, therefore, was not in order.

Dr. Bowditch appealed from this decision, and asked why a Fellow of the Massachusetts Medical Society could not propose an amendment to the By-laws.

The President simply repeated his former statement.

Dr. Hodgdon, with the remark that if a president from purest motives make a wrong decision, and this be shown by the common feeling of the Society to be inconsistent, such president should at once recede from his position, seconded Dr. Bowditch's appeal.

The President then said that the decision was not his, but was made by a former president and sustained

by vote, and therefore was now parliamentary law. Dr. Bowditch's motion was consequently out of order.

DR. MILLET asked, "Suppose we decided *any* question two years ago, is that a reason why we cannot to-day vote to annul what we then did?" It must be so. Any society can rescind a vote. We cannot take away the chartered rights of the Council, but we can rescind any move. We can also unmake the Council we have made. Councilors have certain rights under the Charter, but they cannot act independently of the Society.

DR. DAVID HUNT was surprised that there could be any question of the right of the Society to change By-laws. The Charter, in Section III., in so many words gives that right.

DR. GEORGE C. SHATTUCK said: I understand that this practice of referring matters to the Council is a manner of facilitating work, as in boards of directors in corporations. Business is better done when the Board first consider a motion or amendment and then submit their decision to the larger body. We have over fifteen hundred members. Not one fourth of them are here. The Councilors are always well represented. Their decision is a fair one. Here a decision would not be fair. We have a right to change a By-law, but is it wise to do so before referring the matter to the Council? A quorum of ten Fellows is a legal quorum, so that even that number could make a change in the By-laws. This arrangement of reference is a convenience. It is a pity that any man should try to break it down in order to bring a particular question before the Society.

DR. HODGDON thought discussion irrelevant. His point was that on any subject it was impossible for the Society to recede if the ruling of the Chair be sustained.

DR. HOLMES, of Lexington, thought that *if* only one fourth of the Fellows were present it was due to lukewarmness. Why, then, cannot those who do come act?

After further discussion the CHAIR again said the ruling could not be changed, because it was law.

DR. E. T. WILLIAMS, of Roxbury, thought the ruling of two years ago illegal. If the Council pass a By-law they can reconsider but not amend it. Now the Society cannot amend a By-law, and thus nothing can be done. This must be illegal.

The CHAIR then said he was bound by all usage to hold to his ruling. If he be bound illegally then such limitation should be changed. According to Cushing a sustained ruling must act as a precedent for future action. If a law is clear it is understood. If equivocal it should be referred to competent authority. The Society is competent, and I think cannot admit that it can go behind this law.

DR. CUTLER moved that the decision of two years ago be reconsidered. Motion was seconded.

DR. C. P. PUTNAM said discussion was not in order. Whoever heard of a Chair who had the power to say a motion was out of order. The Society is the only power to say whether a motion be in order. If the Society interpret in a way differing from the Chair they have power to do so.

DR. WILLIAMS said the decision of the Chair had been appealed from. Any ruling can be appealed from. The appeal is the only question which can be considered.

DR. C. P. PUTNAM rose to a question of order, and asked whether the Chair decided that the motion of Dr. Cutler was before the house.

The CHAIR replied that the motion was not in order because the Society was not competent to change a By-law.

DR. MILLET appealed from this decision.

DR. WILLIAMS asked as to which appeal was before the meeting.

The CHAIR said it was Dr. Millet's appeal.

DR. WILLIAMS said that was a point of order, because the first appeal had been seconded, but not settled.

The CHAIR replied that the first appeal was not an appeal from the ruling of the present Chair, and therefore was no appeal.

DR. WEBBER inquired whether the appeal did not relate to a ruling of the Chair.

The CHAIR replied that the Chair did not rule, but that the Chair's decision was parliamentary law.

DR. WEBBER asked, "Is not that a ruling of the Chair?" Chair: "Yes." Several voices: "We appeal from that decision."

In this way the snarl began to unwind itself. The Chair naturally was forced to call upon the Society for votes sustaining the Chair in reference to Dr. Bowditch's appeal. The vote was *viva voce*, and decided in the negative. The Chair was not sustained.

Dr. Bowditch's motion was then recalled.

DR. MORSE, of Watertown, said the Society to-day was taking a stand which endangers its By-laws. Any number of Fellows can thus change the By-laws. The dignity of the Society is being threatened.

DR. BOWDITCH remarked that he expected his motion would be referred to the Councilors.

DR. BRONSON said that for many years this question has been presented to the Society, and sometimes before the Council. It must originate somewhere. According to the By-laws, if the question were decided in the affirmative by the Society it will be referred to the Council. It has been said that the Council does not fairly represent its constituents. Then that is the fault of the constituents who elect the Councilors. It was his opinion that if as a Society we design to carry out the convictions of our fathers, we meet to help the progress of medical science; and therefore he believed that any person of whatever sex or color who can answer the requirements should be admitted to the Society. Whatever the Fellows do here is a work of district societies done in mass. He asked for moderation. If the Fellows cannot get what they want to-day they can secure it legitimately one day by acting through the District Societies.

DR. HARVEY said the whole trouble of to-day is: Our By-laws do not provide the means by which these By-laws may be altered or amended. They are not explicit. The By-laws do say that a By-law cannot be changed without concurrent vote of Society and Council, but *not* how they can be changed or amended. In our District Societies By-laws may be changed if notice be given at a previous meeting. Notice of this motion to change a By-law was not given at a previous meeting, and therefore I think the Society should not be prepared to act. The question of the admission of women is not my point. I refer to the changing of By-laws in this way. It is not right thus to annul By-laws. I do not say the Society has no right to change By-laws. I merely say that no way to do so is provided. This is an innovation.

A Fellow asked, "Does not the action of the Society, in the absence of a By-law, establish a precedent?"

Dr. Harvey replied that this was precisely the point on which the President made his decision. It was a reference to a precedent.

The question was then called and a rising vote counted by tellers appointed by the Chair.

The decision was 209 ayes, 123 noes, and thus the motion passed.

It was then moved that Drs. H. I. Bowditch and Morrill Wyman be authorized to present the result of the vote to the Council that evening. Decided in the affirmative. And, to complete the details of this subject, the matter was presented to the Council, discussed, and the vote confirmed by another strong affirmative.

OFFICERS FOR 1884–1885.

During their meeting the Councilors appointed the officers of the Society for 1884–1885, as follows: —

President, Charles D. Homans, Boston; Vice-President, A. C. Deane, Greenfield; Treasurer, Frank W. Draper, Boston; Corresponding Secretary, Charles W. Swan, Boston; Recording Secretary, Francis W. Goss, Roxbury; Librarian, E. H. Brigham, Boston; Orator, F. K. Paddock, Pittsfield; Anniversary Chairman, Robert Amory, Boston.

On the Committee on Finances E. G. Cutler, of Boston, was appointed vice C. D. Homans. On the Committee to Procure Scientific Papers H. P. Walcott replaces Dr. Paddock, otherwise the committees remain unchanged.

The One Hundred and Third Annual Meeting

of the Society was called to order by President Hosmer in Huntington Hall on Wednesday, June 11th, at nine A. M.

RECORDS, ADDITIONS, AND DEATHS.

Records of the preliminary and annual meetings of 1883 were read by Secretary Goss, also the records of the meeting of the previous day. The Secretary then read a list of Fellows admitted since the last annual meeting, in all ninety-seven. Then followed the names and ages of Fellows deceased during the past year, thirty in all — their average age being fifty-nine and two third years. Readers of the Journal may not have observed that the average age of deceased Fellows has been given in this report during the past seven years. During this period this is the first time that the average age has sunk below sixty-two. This is a remarkable average, in view of the fact that in all vital statistics the average age of the physician is set at thirty-eight years.

THE EXAMINATION OF CANDIDATES.

Dr. Millet presented the following preamble and resolution: —

Whereas the Charter of the Massachusetts Medical Society imposes upon the Censors of said Society, under a penalty, the duty of examining all persons who are desirous of obtaining a license, or letters testimonial, of their qualification to practice medicine and surgery in this Commonwealth; therefore,

Resolved, That the Censors of the Massachusetts Medical Society are hereby instructed and required to examine all persons, whether male or female, without reference to the time when, or place where, they acquired their medical education, who apply for such examination, without reference to admission to said Society; and such letters testimonial when issued shall entitle the holder to all rights and privileges of regular practice excepting membership of the Society.

In presenting his resolution Dr. Millet said that in 1859 the Legislature by a law undertook to dictate who should be members of the Society, though the Legislature had no reserved right to change the Society Charter. And he made the remarkable statement that since 1859 the Council has had no right to elect honorary members, and that such honorary members as within that time have been elected have been elected illegally. After reading his resolution Dr. Millet expressed the opinion that if the course therein set forth had been adopted this Society would not now be in its present dilemma.

Some discussion followed, and the motion was made that the whole matter be referred to the Standing Committee on By-laws of District Societies. Carried by vote in the affirmative.

TREASURER'S REPORT.

Dr. F. W. Draper, Treasurer, then read his annual report, which showed that the Society has in invested funds $32,420.17.

Income for the year	$7963.75.
Balance from old account	1539.42.
	$9503.17.

Outgo: —

Expenses of last annual meeting	$1818.78.
Other expenses	6121.53.
Balance to new account	1562.86.
	$9503.17.

Number of Fellows now on the Catalogue, 1529.

READING OF PAPERS.

An interesting paper on A Case of Chylous Deposit in the Abdomen was then read by F. Nickerson, M. D., of Lowell.

L. Huntress, M. D., of Lowell, next read a highly scientific and valuable essay on The Pitch of the Percussion Sound. This paper elicited remarks from Drs. Bowditch and Garland, who expressed their sense of its value.

An essay on Sanitary Forest Culture, by J. F. A. Adams, of Pittsfield, next followed. It aroused much interest, and the subject was discussed by Drs. Marcy and Blodgett.

Dr. Millet then moved that the subject of tree forestry be referred to the Legislative Committee already appointed, with the request that they bring the same in proper form before the Legislature.

The motion received an affirmative vote, as did Dr. Bowditch's suggestion that Dr. Adams be added to this committee.

An instructive paper on Weight as an Indication of the Character of Risks for Life Insurance was then read by J. Seaverns, M. D., of Roxbury. Dr. Seaverns made a very generous distribution of printed statistics in relation to over and under weight.

Dr. C. W. Swan then read a Health Communication from the Secretary of the Middlesex North Society.

PRESENTATION OF DELEGATES.

The following delegates were then presented by the President: Dr. G. G. Hopkins, of the New York State Medical Society. Dr. E. North, of the New Jersey State Medical Society. Dr. C. M. Carleton Connecticut State Medical Society. Dr. Chas. O'Leary, Rhode Island State Medical Society. Dr. E. A. Pond, from the State Medical Society of Vermont.

Each delegate made felicitous remarks.

After an intermission of fifteen minutes the Annual Discourse was delivered at twelve M. by the orator, JOHN CROWELL, M. D., of Haverhill. At its termination the orator received a vote of thanks for his valuable and interesting address.

THE DINNER.

At one o'clock, P. M., the Fellows marched in the usual order to the Skating Rink, on Clarendon Street, where the annual dinner awaited them.

The Committee of Arrangements deserve great credit for their manner of seating the Society and its guests. Instead of placing the orator and invited guests on the side of the hall they were placed at tables upon a raised platform at the end of the hall. This not only was more convenient and suitable, but by this arrangement the speeches were much more distinctly heard.

Grace having been pronounced by the Rev. Dr. Courtney, the annual attack began. The dinner was unusually bountiful and enjoyable.

Upon the platform, on either side of the Anniversary Chairman, Dr. George B. Shattuck, sat his excellency Governor Robinson, Dr. Mackie of New Bedford, Surgeon-General Holt, the Rev. Frederick Courtney, Samuel Eliot, LL. D., Dr. George C. Shattuck, Dr. J. O. Green, of Lowell, Dr. Jarvis, Dr. Henry I. Bowditch, Mr. H. O. Houghton, the president-elect of the Society, Dr. Charles D. Homans, the retiring President, Dr. Alfred Hosmer, of Watertown, the orator, Dr. John Crowell, of Haverhill, ex-Mayor Dr. S. A. Green, Dr. Ira Russell, of Winchendon, Dr. H. P. Walcott of the State Board of Health, and Dr. Geo. D. Hersey, Secretary of Rhode Island State Medical Society.

DR. SHATTUCK'S ADDRESS.

Shortly after two o'clock Dr. Shattuck called the assembly to order and addressed them as follows: —

Fellows of the Massachusetts Medical Society, — It is my duty as your Anniversary Chairman, in behalf of my colleagues who compose your committee of arrangements, to welcome you to these festivities which it is the custom of our Society to provide at this season of the year as a fitting termination of our annual meeting, — festivities at which its own officials, the dignitaries of the State, distinguished representatives of other State medical societies, of other professions and pursuits in life, become our honored guests. It is my privilege also to congratulate you upon coming together to this eighty-third annual dinner, once again as so often before in such goodly numbers from all parts of this State to show your respect for this organization, your interest in each other and in each others' work, and your appreciation of the benefits which accrue to you from your membership.

The Society has already fairly emerged from the period of reminiscence and celebration, incident to the completion of the first century of its existence, and is quietly at work making the records for the history of its second century, of which let us hope it may have no reason to be less proud than of the first. The past year has simply been one, like many others, of quiet steadfast work and duty conscientiously performed, years which are really as much more important than the epochs they go to make up as the creator is more important than the created. It is not, however, for me to detain you to tell you these things of which you are well aware, in regard to the past of the Massachusetts Medical Society, of which you feel secure. Our newly-elected president will perhaps prognosticate the future for you, and some of our distinguished guests are ready by this time, I am sure, with spontaneous words of encouragement and sympathy. I hasten to anticipate your impatience to hear them. In calling upon your new president, Dr. Charles D. Homans, to respond to the first toast of "The Future of the Massachusetts Medical Society," I shall venture to remind you that it is not the first time the name of Homans appears among those of your presidents, his father, Dr. John Homans, having presided over the meetings of this Society between the years 1859–1862. That knowledge of the past history of the Society which he must possess should help him to forecast the future, however full of changes.

DR. HOMANS' RESPONSE.

DR. HOMANS responded very briefly. He stated that in 1789 there were sixty-eight members of the Society, against 1529 in 1884. This was certainly a wonderful and most gratifying increase. There had been ninety-four new members added during the present year. Dr. Homans alluded to the action of the Society in admitting women, and remarked that perhaps twenty or thirty years hence the present scene would be a ball-room.

SPEECH OF EX-PRESIDENT HOSMER.

The next toast called upon the retiring President in the following words: —

"The official life of him who has been your President the past two years expires to-day. It is, however, hard to associate even official mortality with one of so much vigor; and we associate, rather, many useful years in which what his hands find to do we may be sure will be done with all his might, with the name of Ex-President Hosmer."

DR. ALFRED HOSMER, of Watertown, the retiring President of the Society, responded to the toast as follows: The subject of the Massachusetts Medical Society is a theme which can easily be expanded into a discourse so long and so large that this audience would hardly care to receive and digest it at a single session. Without penetrating its substance, I shall simply touch a small part of its surface, and leave it for the first guest of the day to serve such portion as he pleases as one of the courses at the next annual dinner. As undue importance may be attached to the words of the moribund, perhaps I ought to be cautious in respect to those utterances which are connected with the dissolution of the last tie that binds to official life. Inasmuch as moral qualities enter so largely into the constitution of good citizenship, and as this organization of ours is not wanting in analogy with that compact known as society, whose criminal laws are not always adequate, and whose civil laws sometimes almost forfeit their right to the name, I may, without breach of propriety, allude to matters ethical. I do not do this in the larger sense which includes what our Society has long needed, as much for the convenience as for the control of its Fellows, namely, a well-constructed and comprehensive Code of Ethics, but in a smaller way, that relates to something which is near to us on every side. I would speak of that which either is an obligation made up of three inseparable parts or consists of three duties so closely allied and so intimately connected that neither one can be neglected without detriment to the other two, while the performance of any

one is the discharge of all. I mean the duty which every Fellow owes to the profession, to this Society, and to himself. This triple duty: let every Fellow discharge it without reserve and without presumption, and he will raise the profession, and rise with it, to a higher level of character; he will find in this Society a pride that will never cease to increase; and he must possess that self-respect without which there is no true manhood; and no one can become a physician, deserving the name, unless he first be a man.

GOVERNOR ROBINSON.

Our loyalty to the State, said Dr. Shattuck, is gratified and encouraged this year, as we always would like to have it, by the presence of his excellency the Governor. There are many departments of the State which attract more attention than those concerned with public health and what is now known as State Medicine, there are few of more vital importance to the welfare of the people, and none in which the administrators should be more carefully selected. Governor Robinson needs no introduction to a Massachusetts audience.

A hearty and vociferous greeting met Governor Robinson, who said: Let me bring to you the congratulations of the Commonwealth. Personally I rejoice to see so many of you present to-day. With all the satisfaction that you may take to yourselves I think of the many at home, your patients, who are having their day off also. Seriously, gentlemen, the only duty of the doctor is not in attendance in the sick room. With your education and skill you are something to the community and the State. No man educated to the practice of medicine has done his whole duty when he has taken care of the sick, reaped his profits, and settled down to the results. Ideas gained ought to stimulate to greater good, and the discussion of great questions relative to the people at large. "Governor," I was asked before dinner, "how shall you feel when you stand before a thousand doctors?" My reply was: "There's no danger if I keep my mouth shut." One cannot do justice to this occasion unless ready to recognize the great advance in the science and practice of medicine. Gentlemen, to-day we wonder at the uncertainty, dimness, and error through which these have groped. Honor to them, for they wrought out this advance. I, for one, congratulate you on the step you took yesterday. If a woman can cure me, or my children, or my wife, God bless her to do it. If the man can do it better give him the chance. Why, who objects to woman joining a fellow? In conclusion, the Governor said that as the seven-year term of the medical examiners would expire in a few days he had a good chance now to pick out the proper men for these places. Gentlemen, he continued, I ask you in all plainness and without reserve, will you come to the executive and tell him if you know a man on the present list unfitted for his place?

The Governor then made a strong appeal for maintaining the honor and dignity of the profession, and wished that the next century of the Society's history might be as useful as the last.

REV. DR. COURTNEY RESPONDS FOR THE CLERGY.

Dr. Shattuck then read the ensuing toast: —

The Clergy. "There are three classes of skilled professionals whose duties unite them so closely to the wants and rights of men as to make them necessary advisers and aiders in securing and protecting them in their individual possession of life, liberty, and happiness. They are the curés of souls, the curés of bodies, and the curés of property and personal rights, the Doctors of Divinity, the Doctors of Medicine, and the Doctors of the Law. All three classes of sick are 'halt and lame and blind,' all three are patients and clients, and all three classes of healers are Doctors, Counselors, and Ministers alike."

This excellent statement was lately made by a Doctor of Laws when addressing a meeting of Doctors of Medicine. As a Doctor of Medicine I now reproduce it in addressing a Doctor of Divinity, and call upon the Rev. Dr. Courtney.

The Rev. Frederick Courtney alluded to the temptations he felt to preach a good square sermon; he would, however, remember Bishop Wilberforce's story, that a good preacher was one who could take an audience after a good dinner, on a summer afternoon, and not allow one of them to go to sleep. Dr. Courtney drew several illustrations from the Scriptures not at all complimentary to the profession. But the clerical profession is in the same boat as the medical, he said, as far as calumnies go. Another point of resemblance is the conservatism of both professions. I suppose the opinion of those present is divided as to the advisability of admitting women to the Society. Perhaps, too, the medical profession, like the clerical, is given to a dislike of innovations; and I don't know that the *odium theologicum* is worse than the *odium medicum*, shall I call it? Another thing that troubles us both are the quacks. Dr. Courtney then spoke of the growing severance of the medical profession from Christianity, deprecating this tendency, which he feared was an increasing one.

MR. JUSTICE FIELD, OF THE SUPREME COURT.

The next speaker was introduced as follows: —

"Sir Edward Coke, as you know, is responsible for the statement that 'law is the perfection of reason.' But the judicious Hooker, in his Ecclesiastical Polity, tells us in words, which though often quoted, never lose their rotund sonorousness, that 'of law there can be no less acknowledged than that her seat is the bosom of God, her voice the harmony of the world; all things in heaven and earth do her homage, the very least as feeling her care, and the greatest as not exempt from her authority.' All this is represented to us to-day by Mr. Justice Field, of the supreme judicial bench of the State."

Mr. Justice Field in reply said: It was at one time thought to be the policy of this State to furnish patients for the doctors by overworking its judges. You have been many times before the court as witnesses, and I trust you have always been fairly treated. The law, medicine, and divinity are the three ancient professions. Yours is the oldest. You were doubtless called in when Eve ate her first apple, — if it was a green one. Medicine and law are closely connected. There are medico-legal societies and books on medical jurisprudence. Both professions are exposed to quacks, though yours is worse off in this respect; there are no Indian lawyers, nor vegetable lawyers, nor electric lawyers. In one sense yours is a suicidal profession; it is your duty so to promote the health of the people as to make doctors unnecessary. But I hope the members of this Society will not be so far diminished that you

cannot celebrate this anniversary through the coming generations.

THE ORATOR OF THE DAY.

The chairman introduced the orator of the day, Dr. Crowell, as follows: —

"I think our having heard the orator of the day before dinner upon the Physician as a Popular Educator makes us only the more desirous to hear from him after dinner, and I call upon Dr. Crowell to say something in favor of the scientific investigator."

DR. J. CROWELL, in response, told the story of an eccentric divine who once said to his audience, "My hearers, there is a great deal of ordinary work to be done in the world, and, thank the Lord, there are a great many ordinary people to do it." As one of the ordinary workers, said Dr. Crowell, I wish to speak in behalf of this great majority, and express thanks to those extraordinary workers who do so much for us in the way of patient research and investigation. Dr. Crowell concluded by saying that the specialist has also done great service in curing the ordinary doctors of a certain false modesty in professional fees. The country doctors were plodding on in the old-fashioned way of small charges and long credit until our metropolitan friends came to the rescue, who received the fee of fifty or a hundred dollars with such a graceful nonchalance as to give great moral courage to their suburban brethren. With this worthy stimulus before us, we do now venture to charge two dollars a visit and five dollars for a consultation.

Other speeches were made by DR. SAMUEL ELIOT and PROF. W. T. SEDGWICK of the Institute of Technology, and letters of regret were read from DR. J. S. BILLINGS, of Washington, and PROF. R. T. HOWARD, of the McGill Medical College, Montreal.

The occasion was in every way successful and enjoyable, but might it not be suggested that if speakers at these annual dinners would but give the active principle (the alkaloid as it were) of what they have to say the speech-making would not only consume less time, but more speakers could be heard by that large number of Fellows who invariably are forced to seek their trains in the very middle of this pleasant feature of the entertainment? Nearly seven hundred Fellows were present. At intervals music of excellent quality was provided by the Germania orchestra.

MASSACHUSETTS MEDICAL SOCIETY.

COUNCILORS' MEETING.

THE annual meeting of the Council was held at the Medical Library, Boston, on the evening of Tuesday, June 10, 1884. One hundred and sixteen councillors were present. The meeting was called to order by PRESIDENT HOSMER at seven o'clock.

After the reading of the record of the previous meeting by the Secretary, and its acceptance, the roll of those composing the Council for the year 1884–85 was read. The Secretary announced the names of ninety-seven Fellows who had been admitted during the year, and of thirty who had died.

FINANCES.

The Treasurer's report showed the year's receipts — including a balance of $1539.42 from the previous year's accounts — to be $9503.17. The disbursements amounted to $794.31, leaving a balance of $1562.86. The invested funds of the Society amount, as in the previous year, to $32,420.17. The Society now bears upon its catalogue the names of 1529 members. In accordance with the recommendation of the Committee on Finances, reporting through Dr. Homans, it was voted that $1328.43, being eighty-five per cent. of the balance remaining in the treasury, be distributed among the District Societies. In accordance with the recommendation of the same committee it was voted that the Treasurer sue two Fellows for their dues and remit the dues to two others.

REPORT OF COMMITTEE ON MEMBERSHIP.

DR. AYER, for the Committee on Membership and Resignations, reported a list of names of those desiring to become retired members, and of those wishing to resign. The Council voted in accordance with the recommendations of the committee. Several others were dropped from the roll for delinquency in assessments.

REPORT OF COMMITTEE ON PUBLICATIONS.

DR. SHATTUCK, for the Committee on Publications, reported that no essay had been received in competition for the Society's Prize. Also, that the committee were averse to subscription by the Society to the "Quarterly Epitome." The report was adopted.

REPORT OF COMMITTEE ON BY-LAWS.

DR. PRESBREY, for the Committee on By-laws of the District Societies, presented a report which stated that some of the District Societies have by their By-laws "Committees on Ethics." Inasmuch as a district society has nothing to do with ethics and discipline, and can invest a so-called Committee on Ethics with no powers which do not already belong to its members by virtue of their membership in the Society, such a committee is superfluous, and ought not to exist, and any district by-law whose purpose is to create and empower such a committee is liable to mislead and embarrass, and ought to be abolished.

It was voted to accept the committee's report.

ELECTION OF OFFICERS.

At this stage of the meeting the Committee on Nominations reported the following list of candidates for the offices of the Society for the ensuing year, and the same were elected by ballot: Dr. Charles D. Homans, Boston, President; Dr. Adam C. Deane, Greenfield, Vice-President; Dr. Frank W. Draper, Boston, Treasurer; Dr. Charles W. Swan, Boston, Corresponding Secretary; Dr. Francis W. Goss, Roxbury, Recording Secretary; Dr. Edwin H. Brigham, Boston, Librarian.

Dr. Franklin K. Paddock, of Pittsfield, was chosen Orator, and Dr. Robert Amory, of Boston, Anniversary Chairman for the next annual meeting.

The President introduced the President-elect, who made a brief and fitting response.

THE NEXT MEETING.

It was voted that the next annual meeting be held in Boston on the second Wednesday in June, 1885.

APPOINTMENT OF COMMITTEES.

The President nominated, and the following were appointed to constitute the standing committees: —

Of Arrangements. — C. E. Wing, A. T. Cabot, H. C. Haven, C. H. Williams, J. W. Elliot, F. H. Hooper.

On Publications. — G. C. Shattuck, R. M. Hodges, B. E. Cotting.

On Resignations. — J. Ayer, F. Minot, D. W. Cheever.

On Finances. — W. W. Wellington, B. S. Shaw, E. G. Cutler.

To Procure Scientific Papers. — C. W. Swan, G. S. Stebbins, J. R. Chadwick, R. H. Fitz, H. P. Walcott.

On Ethics and Discipline. — G. J. Townsend, G. E. Francis, A. H. Johnson, C. Howe, F. C. Shattuck.

On Medical Diplomas. — W. L. Richardson, A. H. Cowdrey, E. J. Forster.

PETITION FOR A NEW DISTRICT SOCIETY.

A petition was presented from several physicians residing in certain towns in the Norfolk District, and from Hingham, in the Plymouth District, requesting that they might be allowed to form a society to be called the Norfolk South District Medical Society. The petition was referred to Drs. Hodges, C. E. Stedman, and Spooner as a committee to report thereon at the next meeting.

AMENDMENT OF BY-LAWS. ELIGIBILITY OF WOMEN.

As was anticipated the most animated part of the meeting was the debate on the amendment to By-law I., making women eligible as candidates for Fellowship in the Society. The debate was opened by Dr. Bowditch, who, with Dr. Wyman, constituted the committee from the adjourned meeting of the Society, held during the afternoon, to present to the Council for its concurrent action the following: —

Voted, That the first four lines of By-law I. be stricken out, and the following be put in their place, namely, —

"Candidates for admission into the Massachusetts Medical Society may be either male or female, and every candidate must, by proper credentials and examination, satisfy the Censors of said Society that he possesses the following qualifications for Fellowship."

The adoption of this amendment was strongly advocated by Drs. Bowditch, Wyman, Bronson, and H. P. Bowditch, and vigorously opposed by Drs. Shattuck, Dwight, Warren, Minot, Reynolds, and Harvey. On motion of DR. HODGDON the vote was taken by ayes and nays. The amendment was carried by sixty-three in the affirmative to forty-seven in the negative.

The vote by districts was as follows: —

	Ayes.	Nays.		Ayes.	Nays.
Barnstable	1	0.	Middlesex South	17	1.
Berkshire	1	0.	Middlesex East	2	0.
Bristol North	2	0.	Norfolk	9	5.
Bristol South	2	3.	Plymouth	5	0.
Essex North	1	1.	Suffolk	11	27.
Essex South	3	4.	Worcester	8	2.
Franklin	0	0.	Worcester North	0	3.
Hampden	1	0.		—	—
Hampshire	0	1.	Total	63	47.
Middlesex North	0	0.			

Adjournment was voted at 9.20 P. M.

— The New York State Pharmaceutical Association held a convention at the College of Pharmacy last week, and after the election of officers the names of ten delegates were selected to be sent to the Governor, who will appoint five of the list on the State Board of Pharmacy.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

DECEMBER 8, 1883.

A CASE OF RENAL ABSCESS.

DR. C. ELLERY STEDMAN read the case.

Mrs. B. M., aged twenty-two, was admitted to the Nervous and Renal Department of the City Hospital, November 10, 1883. Dr. Webber asked Dr. Stedman to see her, and as the latter thought he found signs of inflammatory action in the pelvis the patient was transferred to his care. She was very pale, feeble, and near her end, the eyeballs rolled up, and the features pinched. She was in no condition to bear questioning, but the following history was elicited: Of her family antecedents little could be learned. Her catamenia have been regular, lasting eight days, of which the first two were painful. She used twelve napkins. Eight months ago she miscarried at the third month. She was last unwell from the 17th to the 20th of May last inclusive, and considers herself six months advanced in pregnancy. For months has had leucorrhœa. For eighteen months she reports she has had inflammation of the bladder. Whether this is the name she gives to her malady or is the diagnosis of a physician is not recorded. During the last six weeks there has been sharp paroxysmal pain in the lower part of the left back, but she dates the commencement of her present trouble at about twelve days ago, since which time she has been in bed. At that period there began sudden sharp pain in the left lumbar region, radiating downwards toward the bladder; this pain has been constant, sharp, and worse on movement, micturition, and defecation, — somewhat relieved by drawing up her legs, — located specially on the left side, but also general in the abdomen. From the first there has been vomiting of yellow matter, frequent both on an empty stomach and after eating and drinking. There is no appetite, and the bowels are constipated; a movement was had by enema four days ago, but caused the patient great pain. Passing urine gives her so much pain that she voluntarily retains it, acute distress preceding and following the act. The urine on the 11th was cloudy, contained one third per cent. albumen, and had a sediment of normal blood, a large amount of pus, and triple phosphate crystals. She had never passed gravel or stone. There are now no chills, headache, or delirium. Temperature when admitted 10th November was 100.5° F., on the 13th 99° F., and the pulse 130, regular and weak. The tongue dry and cracked, with a brown coat. The heart gives out a loud murmur over the pulmonary orifice, and is a little enlarged, perhaps, to the left. The abdomen is distended, and universally, though not excessively, tender. In the hypogastrium, reaching to within two inches of the umbilicus, is a tumor with well-defined border, extending on the right into the lumbar region; this tumor is felt to change its shape; no fœtal heart is heard; above the tumor the abdomen is resonant. The areolæ are dark, and there is milk in the breasts. A dark line runs from pubes to umbilicus. In the left loin, in the neighborhood of the spleen, is a feeling of resistance, over which is resonance. The patient lies with knees drawn up, and features pinched, complaining of pain in the

back and tenderness over lower end of spine. The next day the record says that she vomited little during the night, but required several subcutaneous injections of one fourth of a grain of morphia. During the next three days vomiting increased in frequency; nutrient enemata were either not retained or came away little if at all changed. There was no delirium, and she died at ten minutes past ten o'clock P. M. of the 17th November.

Dr. Gannett made the autopsy thirty-six hours after death. Nothing of especial interest is recorded till the left kidney was reached. This organ was represented by a lobulated, sacculated mass measuring twenty-four by fourteen centimetres. Its form was a series of sacs or pouches about the size of a peach, and contained a thick, greenish-yellow, offensive pus. No renal substance remained except a thin layer over the lower border, perhaps five millimetres in thickness. The ureter on this side was dilated throughout to the size of the forefinger, its mucous membrane somewhat injected, reddened, and covered with a layer of pus. The right kidney was of usual size, density, and color, the capsule easily detached, leaving a smooth surface; on section the surface showed a uniform dark-red color, in which the distinctions of various sections could be made out. The right ureter was of usual size throughout. The liver was slightly enlarged, of usual color and density. The bladder was empty and contracted, containing a small amount of pus. The mucous membrane about the trigonum thickened, reddened, velvety, in many places of a reddish-blue color. The uterus contained a fœtus with the usual appearances in the sixth month of pregnancy.

The diagnosis of this case was not assured. The history of a cystitis made the appearance of pus and blood in the urine seem natural. There was no distinct tumor in the left loin, only pain and a sense of resistance to the touch, and resonance existed, as the colon superimposed would demand. The choice lay between perinephritic abscess or pyelo-nephritis, the latter being correct. An interesting case of the former disease, with suppurating kidney, was published by Dr. Lyman in the *Boston Medical and Surgical Journal*, cv., 21. This, too, was made interesting by its complication with early pregnancy; there was a tumor in the right renal region; the urine was alkaline, one fourth per cent. albumen, much pus. The tumor was discharged of pus by several operations, but the patient failed, died, and no autopsy could be had. The case resembled that now reported in several respects, but at no time since our patient was seen did operative interference seem proper.

There was history of cystitis for eighteen months, but who gave the name to the affection is not known. From Dr. Gannett's report of the autopsy it would appear that hydronephrosis had existed, as shown by the greatly dilated ureter, which may have been dammed at its entrance to the bladder by inflammation of that viscus; or hydronephrosis may have been congenital, or acquired, not recording symptoms, but waiting for some action like pregnancy to be set up and close the ureter. Says Roberts: "Simple stagnation of the urine (like decomposition) from an obstruction in the ureter usually causes only dilatation [hydronephrosis]; but if it occur suddenly the pressure of the dammed-up urine may excite acute pyelitis. Severer inflammatory changes occur if the stagnant urine becomes decomposed and its urea converted into carbonate of ammonia. It is probable that the intractable, generally fatal pyelitis which sometimes follows pregnancy arises in this way."

But in regard to pyelitis in pregnancy, in the time and with the means at my disposal, I have been unable to collect any examples, though doubtless many cases are scattered through medical literature.

DR. RICHARDSON inquired if there were any history of previous inflammatory trouble, such as might have bound the uterus down on the affected side.

DR. BOARDMAN quoted Ziemssen in support of the view that dilated kidney was sometimes the result of pressure of the gravid uterus upon the ureter, although the most frequent cause was there stated to be occlusion of the ureter by renal calculus, and a very common cause catarrh of the bladder extending up along the ureter. Cases were recorded which were due to perinephritic abscess, and some in which there was caries of the vertebræ, but in those cases when the pus entered from without there was no true pus cavity in the kidney.

DR. EDES thought malignant disease of the uterus a most common cause, when invading also the surrounding tissues, of compression of the ureters, and consequent hydronephrosis and atrophy of the kidneys.

DR. LYMAN said it was important that these things should be discussed with reference to the treatment, and especially with reference to an early evacuation of pus.

UMBILICAL HÆMORRHAGE.

DR. RICHARDSON reported a case of hæmophilia, which will be published. In one similar case which Dr. Richardson had seen in the Boston Lying-In Hospital, on the third day after birth, there was first epistaxis, six hours later bleeding from the mouth, then from the navel, and the child died thirty-six hours later.

DR. HODGDON said he had seen half a dozen such cases, almost uniformly fatal, with hæmorrhage from the cord and from the mouth and nose, and, in females, from the vagina. In two of the cases there were purpuric spots. The treatment was astringents and pressure over the cord, and chloride of iron internally.

DR. FIFIELD remarked that he had reported to this Society, two or three years ago, a case successfully treated by the application of plaster of Paris, first mixed with a little salt, then with water, and spooned on while setting. There was not a drop of blood lost after the application. Dr. Fifield was unable to state where he got the idea, but on reporting the case at the Boston Society for Medical Improvement some of the members reported successful treatment by the same means. He had heard a nurse describe a case which the attending physician sewed up, over and over, as a woman sews a seam, without attempting to transfix, and it succeeded. Dr. Fifield thought that the only rational way was by compression. In the case first mentioned the plaster remained on about four days. There was no tendency in that case to hæmorrhage elsewhere. The blood welled up from a pit or depression, as in Dr. Richardson's case.

DR. LYMAN said that, no doubt, these cases arise from want of coagulability of the blood, and asked if the child in the case reported presented icterus or anæmia (to which a negative answer was returned). If from thin blood the bleeding occurs, neither compression nor ligature will avail in the majority of cases; if from other or accidental causes the hæmorrhage is

arrested here as easily and by the same methods as in other parts of the body.

Dr. Richardson stated that the mother had used cream-of-tartar water, three or four tumblers daily.

Dr. Fifield remarked that a better styptic than iron was the fluid extract of hamamelis, the power of which in repressing hæmorrhage was perfectly wonderful. Two years ago he was called to New York to see a patient who had had hæmorrhage, and whom he had treated with ergotine subcutaneously, but the extract of hamamelis had subsequently had more effect than anything else tried. Dr. Fifield had recently seen cases of pulmonary hæmorrhage which had been arrested by about two doses of the hamamelis. Ergot, he thought, was too slow in its action.

Dr. Boardman said he would venture the opinion that ergot would have no effect on the now atrophied vessels of the umbilicus in Dr. Richardson's case. In the treatment of these cases it would seem to be well first to make a diagnosis, the fact being that hæmorrhage is frequent in cases of icterus neonatorum, but not so much the cause of death as that which causes the icterus. With the diagnosis of hæmophilia the methods suggested would seem to be poor treatment, except that by means of the plaster of Paris or the actual cautery, ordinary styptics having failed. As to the diagnosis, it is erroneous to regard the want of coagulability of the blood as denoting hæmophilia. From the article of Immermann, in Ziemssen, it appears that quite the reverse is true in the early stage of hæmorrhage; that the blood in bleeders is not paler in color than in healthy persons; that it maintains its coagulability for a long time during hæmorrhage; that it is not deficient in red corpuscles, but, on the contrary, "contains an unusually large amount of these [coagulable] elements."

In the present case, however, there has been no icterus, and the blood appears to have been notably non-coagulable; yet the diagnosis of hæmophilia seems to be confirmed by the subsequent appearance of spots of discoloration. Possibly, in the new-born infant there is a comparative deficiency of the coagulable elements of the blood, which fact may explain away, in these cases, the apparent contradiction of experience. Upon this point, however, he had no information.

Dr. Abbot thought the bitartrate of potash should not be left out of the account in considering the probable cause of the hæmorrhages. The continuous use of it, in considerable quantities, for some weeks, by the mother, was calculated to produce an impression on the fœtus, as was well known to be the case with certain powerful drugs, such as chloral and other sedatives, even when the mother experienced no ill effects.

Dr. Richardson said that the mother passed several large clots, as she had done in two previous deliveries.

Dr. J. Stedman referred to a case of umbilical hæmorrhage to which he was called in the night, a patient of the late Dr. Susan Dimock, who had tried a variety of remedies without avail. Dr. Stedman took a piece of fine, soft sponge, wet it and squeezed the water out, powdered the sponge with subsulphate of iron, applied this to the umbilicus, over the sponge laid a patch of lint, then a strip of adhesive plaster, and finally a bandage. The hæmorrhage ceased, and did not recur. The dressing was left on for several days. The bleeding began the day of the separation of the cord.

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A CASE SHOWING THE EFFECTS OF HOT WATER ON PAPILLARY TUMORS OF THE BLADDER.

Dr. Baker reported the case of a patient, aged fifty, who nine months ago began to pass blood with the urine, with no pain, but a gradual increase in the hæmorrhage. He was sent for to see the patient two or three weeks ago, and examined the bladder through the dilated urethra, and found four papillary tumors of the bladder, the largest of them being of the size of a large English walnut, and pedunculated, the smallest of the size of a filbert, also pedunculated. The interior surface of the bladder was villous. It would have been a comparatively simple thing then to have removed the pedunculated tumors, but there was a good deal of cystitis, and Dr. Baker thought it would be better to open the bladder into the vagina, which was done. The tumors were let alone. Five or six quarts of hot water were injected per urethram, returning through the artificial vesico-vaginal fistula by the vagina, four times a day for several days, when the smaller of the growths, which came down towards the opening, was compressed and removed with the scissors, styptic cotton being used to control the hæmorrhage. In a week or ten days ether was administered, and through the fistula it was discovered that the growths had diminished certainly three quarters in size, so that the larger was not greater than the first joint of the thumb, and was comparatively bloodless, while the whole bladder was less congested. The work of removal was comparatively simple, and free from hæmorrhage. The inner surface of the bladder was then thoroughly curetted, the oozing being controlled by sponge and styptics. The case had gone on well since, and, so far as immediate recovery was concerned, promised well. Dr. Gannett had examined the growths, and found nothing malignant. The wall of the bladder at the site of the incision was fully or more than half an inch thick, but not especially indurated.

Recent Literature.

Chemistry: Inorganic and Organic, with Experiments. By Charles Loudon Bloxam, Professor of Chemistry in King's College, London, etc. From the Fifth and Revised English edition. With two hundred and ninety-two Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1883.

Professor Bloxam's book is, in most respects, a very satisfactory one. We know of no treatise on chemistry which contains so much practical information in the same number of pages. It contains nearly 300 illustrations of judiciously selected experiments, which add much to the value of the work as a text-book. Such matter as would be comparatively unimportant to the majority of students, for example, the chemistry of rare elements and compounds, has been printed in smaller type, so that the book can be readily adapted not only to the needs of those who desire a tolerably complete course of chemistry, but also, by the omission of the smaller type, to the needs of those who desire only a general knowledge of the subject without going into all the details.

The table of contents is deserving of mention. It covers seventeen pages and is, in fact, a complete abstract of the whole subject, and may be usefully employed by the student in reviewing the book.

We notice with pleasure that in the present edition some changes have been made in the theoretical portion, to bring the book more into harmony with modern views on this subject.

Professor Bloxam still adheres in general to the English weights and measures and to the Fahrenheit thermometric degrees. We hope to see a change in this respect in subsequent editions.

We take pleasure in recommending this work both as a satisfactory text-book, and as a useful book of reference for those who desire such a book but do not feel able to own any of the more expensive treatises and dictionaries.

Medical and Surgical Journal.

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THE MASSACHUSETTS MEDICAL SOCIETY AND WOMEN.

IN the other columns of this issue a full report of the late meetings of the Massachusetts Medical Society and of its Councilors will be found. The reunion of the Society was fully as successful and agreeable as usual. The only unusual feature, the vote by the Society and the Councilors that women be admitted to examination by its Censors, we were merely able to announce with but little comment last week, nor are we quite sure that it is worth while to do more than that even now. The time for argument is gone by, and there are no new ones on either side to be adduced.

There are, however, a few things which should be said before the matter becomes past history, though some of them be repetitions. At the meeting of the Society 332 members out of 1529 were present, of whom 209 voted in favor of admitting women and 123 against their admission. At the Councilor's meeting, 110 out of 172 Councilors voting, sixty-three voted in favor of admission and forty-seven against. It is evident from this that the organization is not moved to its inmost depths by the question. The result would seem to represent the favor shown to the persistent suitor. A comparatively small number of radicals by nature, of ardent enthusiasts who persuaded themselves that this cause was synonymous with abstract justice, and of clamorous agitators whose restlessness is now free for something else, were pretty sure sooner or later to find themselves in possession of the field at least long enough for their object; but this moment came sooner than might have been expected owing to the introduction of another element of discussion, namely, the right of the Society to change its own By-laws.

Two years ago the President of the Society ruled at one of these adjourned meetings, at which it was hoped to secure a vote favorable to the admission of women, that the initiative of new business or of any change in By-laws must take place in the Council. This ruling was at the time sustained by the members present by a small majority, but the same ruling was voted down this year vigorously, and this ruling has probably had much to do with the vote to admit women at the present time. What the real sentiment of the Society is upon that subject is not known, and is now of little consequence; but there is still in Massachusetts enough of that spirit which, in England, sent Strafford to the scaffold, and here, whilst encouraging Ann Hutchinson's Antinomian pranks, put John Winthrop in Coventry. The idea of the representatives being greater than their constituency, of the part controlling the whole, of the stream rising higher than its source, was thoroughly distasteful, and aroused a feeling which a plentiful use of such expressions as usurpation, oligarchy, and tyranny served to foment still further, a feeling which should not be confounded with a recognition of the justice, the wisdom, or the necessity of encouraging the practice of medicine by women. We are not undertaking the defense of the parliamentary rulings of the Society's presiding officers, but we do not hesitate to say that there is nothing for the Society to be proud of in the management of these adjourned meetings. If the By-laws are insufficient or unsatisfactory a usual and dignified method should be provided for changing them. If the Councilors do not represent the districts it is easy to elect others by fair, open, and legitimate methods. The Council is unquestionably better adapted for the origination and transaction of business than the Society, which is unwieldy, meets at long intervals, and then only for a short time. The meeting on the afternoon of June 10th manifested sufficiently clearly the drawbacks inherent to the transaction of serious and important business by the Society where the occupation of a certain number seemed to be to vociferate "Question!" "Question!" Whatever may be said of the President's parliamentary law his good nature was very praiseworthy, notwithstanding which it seemed at one time as though his office would be voted abolished. Now that the claims of women are satisfied would it not be well for the Society and its Council to improve this moment of tranquillity, and to adopt a manual of parliamentary procedure, and to revise its By-laws? Let the Society understand distinctly where, when, and how its business is to be transacted. As things are at present, we believe some of those who were most active in promoting the precedent set at the last meeting will be among the first to regret their action.

The question of the admission of women to the Massachusetts Medical Society is settled; that of the wisdom or profit of their attempting the practice of medicine, save in very exceptional cases or under very exceptional circumstances, is entirely open. We shall say a few words and then take leave of it, we hope,

for some time to come. We have seen no reason to change the views consistently held by this journal as to the fitness of women to practice medicine and as to the wisdom of encouraging them to do so. We are aware that we are not on the *popular* side of this question, that our views are called ungenerous by those who believe there must be a selfish motive, and narrow by those with whom novelty is synonymous with wisdom. But we dislike demagogism, whether in politics, in society, or in the professions, and do not think improvements necessarily result from change. We believe that women in this particular community are already aided and abetted in too many foolish fads and fancies. There is too much bad piano playing and too little good cooking and sewing taught them. They, more than men, are too much encouraged already to *attempt* uncommon things rather than to find an interest and profit in doing ordinary things thoroughly well. In regard to this particular fad of encouraging them to practice medicine, we know that some of those who have been in favor of it, and have even now voted to admit women to examination by the Massachusetts Medical Society, but who are candid, acknowledge that their experience derived from consultations with our best female practitioners, and from cases sent to such for treatment, tends to convince them it is a mistaken movement. If the sum total of human happiness can be increased by the pursuit by women of what have hitherto been regarded as virile occupations so much the better, but both theory and practice lead us to believe it as little in regard to medicine as to law, theology, or politics. No action of medical societies or of legislatures can alter the male and female physiology, and the experience of ages is the best index of the mental, moral, and physical fitness of each sex for the profitable exercise of certain functions. If we desire to prove these problems over again for ourselves in this age and community there will undoubtedly be a limit to the amount of harm which will result, and it may keep us out of worse mischief.

THE IMPORTANCE OF A KNOWLEDGE OF THE PHYSICAL CHARACTERS OF DRUGS.

Among the wants which the average young man feels in entering upon the practice of his profession is a practical familiarity with the physical properties of the drugs which he prescribes. In former days when the medical student spent some time as an assistant to a physician, especially when the dispensing of drugs was a part of the doctor's and more particularly of his assistant's duty, there was opportunity to become habituated to the taste, odor, and appearance of medicines. But many young practitioners of the present day, while tolerably familiar with the common therapeutical action of remedies, and possibly even having given some attention to physiological experiments on the action of drugs upon the nervous, circulatory, and other systems of the body, are yet liable in the early part of their practice to mortifying errors of tact and judgment in their selection of remedies, which could have been avoided by a better knowledge of the physical properties of the instruments they use. Outright violations of the principles of pharmacal compatibility are, perhaps, not so common as the choice of remedies and combinations, which, while therapeutically correct, and even pharmaceutically not incompatible, yet in taste and looks offend unnecessarily the senses of the patient. "Elegant preparations" are freely offered by the manufacturing pharmacists, and physicians often resort to them chiefly because they themselves lack either the time or the knowledge requisite to make up palatable prescriptions of their own. Undoubtedly many practitioners owe their success largely to a study of what may be called the æsthetics of prescribing.

The foregoing remarks have been suggested by an exhibit, which we noted with pleasure, at the recent meeting of our State Medical Society. In the museum of the new building of the Harvard Medical School there are a series of alcoves devoted to a full, methodical, and exceedingly valuable display of the principal drugs of the Pharmacopœia, arranged by the lecturer on this department in the School. The first alcoves are devoted to the drugs of organic (animal and vegetable) origin. These are arranged in alphabetical order of the crude drugs. Accompanying each specimen is a photograph (and many of the photographs are of great artistic excellence) of the growing plant. The pharmacopœal, botanical, and common names are all written upon the descriptive card. The specimen generally includes the part of the plant used in medicine, bark, root, leaf, etc., and also the powdered crude drug. Next come the pharmaceutical derivatives, tinctures, extracts, etc., in due order. The alkaloids are also displayed, each in connection with its constituent drug. An important feature of the exhibit is the quantitative assays of the drugs. For instance, under cinchona we find, besides specimens of each of the different barks, a bottle containing exactly one hundred grammes of a bark of standard purity and strength. Next this is placed a bottle containing the amount of quinine assayed from the particular specimen of bark. Then follow the other alkaloids derived from an equal quantity of the same specimen. Under opium the relative amounts of the various alkaloids and of meconic acid contained in one hundred grammes of the drug are represented in an especially striking manner.

After the organic come the inorganic drugs arranged in the same methodical way. All this, admirable as it is, appeals simply to the eye of the student, and we were glad to find that provision was made elsewhere for giving him the further knowledge which is so needful. In cases placed about the reading-room upon the lower floor of the building were specimens of all the common drugs, accessible at all times to the senses of touch, smell, and taste. Here, as readily as behind the counter of a pharmacy, might one learn what was needful to know of the physical characteristics of drugs. Such knowledge, it is to be hoped, will soon be afforded every medical student as a very important part of his professional outfit.

MEDICAL NOTES.

— The heredity record on 132 cases of cancer under treatment at the Middlesex Hospital during the year 1882 was as follows: In thirty-four cases of uterine cancer there was a history of previous malignant disease in eight families, or in 23.7 per cent.; in forty-one cases of breast-cancer, in ten families, or in 24.3 per cent.; in twenty-eight cases of cancer of the tongue, mouth, and lip, in one family, or in 3.5 per cent.; whilst in eighteen miscellaneous cancers, including ten of the rectum, no history of any previous malignant disease could be obtained. Thus, of the whole 121 cases, there was a history of previous malignant disease in nineteen families, or in 15.7 per cent.

— In an article by Dr. Reichel, of Breslau, copied into the *St. Louis Courier of Medicine* from the *Berlin. klin. Woch.*, he describes a case of general erythema caused by sublimate dressing. A man had been operated on for relief of genu valgum; the leg from foot to pubes was enveloped in sublimate gauze. On the ninth day burning and itching of the limb necessitated the removal of the gauze. The leg was œdematous, and covered with a papulo-vesicular eczema. A general erythema was now developed; the whole body, except the face and neck, was thickly covered with small red spots. The general health was good; no salivation; temperature raised. Salicylic dressing was substituted, and on same day temperature became normal; and in four days after the whole rash was gone.

— Dr. Lawson Tait, of Birmingham, England, is about to visit this continent for the purpose of giving an address on abdominal surgery before the Canada Medical Association at Montreal, August 25th.

— The correspondents of the *Medical Press and Circular* are very generally by the ears over the question "What is medical advertising?" which was raised by one signing himself "Anti-humbug" some weeks ago. Several contributions upon the subject have appeared, and a good deal of covert sarcasm has been aimed at various leaders of the profession. The issuing of bulletins by the attending physician whenever any noble peer has sneezed unduly or a member of the royal family has the stomach ache is justly made an especial object of ridicule. The attempts of some writers to establish a distinction between legitimate and illegitimate advertising are rather laughable. But meantime it certainly does remain a difficult point to determine exactly where the dividing line lies between self-respect and self-exaltation.

— A correspondent of *Science* (June 6th) describes a tailed child which was recently born in Louisville, Ky. A visit was made by a party of four, which included a prominent physician. The writer says: —

"We found a female negro child, eight weeks old, normally formed in all respects, except that slightly to the left of the median line, and about an inch above the lower end of the spinal column, is a fleshy, pedunculated protuberance about two and one half inches long. At the base it measures one and one quarter inches in circumference. A quarter of an inch from the base it is somewhat larger, and from that it tapers gradually to a small blunt point. It closely resembles a pig's tail in shape, but shows no signs of bone or cartilage. There seems to be a slight mole-like pro uberance at the point of attachment. The appendage has grown in length about a quarter of an inch since the birth of the child.

"The mother, Lucy Clark, is a quadroon, seventeen years old, and the father a negro of twenty, both normally formed.

"In Darwin's Descent of Man, vol. i., p. 28, he speaks of a similar case, and refers to an article in *Revue des Cours Scientifiques*, 1867–68, p. 625. A more complete article is that by Dr. Max Bartels, in *Archiv für Anthropologie* for 1880. He describes twenty-one cases of persons born with tails, most of them being fleshy protuberances like the one just described."

— We learn from the *London Medical Times* that in a paper lately read before the Académie de Médicine Dr. Marc Sée stated that he has deduced the following conclusions from his anatomical measurements: "(1.) In the normal state the united calibres of the two bronchi are equal to the calibre of the trachea, and I may add that, according to a few measurements which I have made, the united calibres of the bronchial subdivisions equal the calibre of the bronchus from which they originate. The respiratory passages, therefore, represent a cylinder and not a cone. (2.) In the pathological condition the equilibrium between the capacity of the trachea and bronchi may be destroyed, either in favor of the bronchi, as in chronic tuberculosis, or to the advantage of the trachea, as in emphysema."

— The *Annales des Maladies de l' Oreille, du Larynx et des Organes Connexes*, founded in 1874 by Isambert and Krishaber, deceased, and Ladreit de Lacharrière, is to be made, under the direction of the surviving editor, an international journal, and is to be published in both French and English.

The direction and publication will remain in Paris, and the editors selected for the laryngological and otological departments respectively are, in England, Morell Mackenzie and Woakes, in Belgium, Capart and Ch. Delstauche, and in America, J. Solis Cohen and Clarence J. Blake.

— Dr. William Goodell, of Philadelphia, recommends the following prescription in pruritus vulvæ: Carbolic acid, one drachm; morphine sulphate, ten grains; boracic acid, two drachms; vaseline, two ounces. Also pat the parts with a sponge soaked in boiling-hot water.

— The house No. 421 Shawmut Avenue in this city, which has been secured for the Home for Aged Couples, was formally opened last week in the presence of a distinguished company and with agreeable festivities.

— A correspondent of the *British Medical Journal* calls attention to the following prescription, which was made up for a lady, and which gave rise to alarming results on account of the solubility of strychnia in chloroform and the insolubility of the latter in water: —

℞. Liquoris strychniæ ʒi.; spiritûs chloroformi ʒiij.; aquæ ad ℥iss. M. A teaspoonful to be taken three times a day in water. "Upon taking the final dose, which tasted unusually hot," adds the writer, "my patient was seized with spasmodic contraction of the extensors of the feet and legs, the limbs being forcibly projected under the table at which she sat. These symptoms soon passed off, but were alarming for the time. On my being shown the bottle which had contained the medicine a drop or two of water was seen remaining in it, and beneath this a globule of chloroform, which proved to be highly charged with strychnia.

"The prescription was faulty. Chloroform is a powerful solvent of sulphate of strychnia, and itself is not very soluble in water. More was ordered than the menstruum could take up; the surplus, therefore, appropriated to itself a large amount of the salt and fell with it to the bottom of the bottle."

— Governor Robinson at a meeting of the Executive Council last week renominated twenty-five medical examiners in various parts of the State, among them Medical Examiners Draper and Harris, of Boston.

— In a recent article in *Macmillan's* on a great Town-Hospital, intended to inform the general public on hospital patients and methods, the writer (a trained nurse?) speaks of the carbolic spray being played upon the wound of a patient, and remarks exegetically for the benefit of the reader that this is done for the purpose of keeping the wound warm!

NEW YORK.

— At a meeting of the Society of Medical Jurisprudence and State Medicine, held at the Academy of Medicine June 11th, a paper by Prof. J. G. Kiernan, of Chicago (formerly of New York), entitled Some Suggestions Concerning the Dwight Insurance Case, was read by H. W. Sackett, Esq. In it the writer said "The decision in the Dwight case was fully warranted, even allowing that the deceased was a suicide. Supposing Colonel Dwight was insane, and with an insane idea of smartness had committed suicide with a vague notion of making money for his friends, would that act vitiate his policy? Under the laws of Iowa it would not, and legally the policy could not be declared void." The question was stated to be simply one of a contract with an insane person, and not of fraud. The paper was discussed by Drs. Spitzka and Harwood.

— An informal opening of the "Health Home" at Coney Island, organized under the auspices of the Children's Aid Society, took place on the 11th of June. The party of ladies and gentlemen who attended it first visited the "Summer Home" at Bath, L. I., which was the gift of Mr. A. B. Stone, and which receives some four thousand poor children during the season. They then went to the new sanitarium on the western part of Coney Island. It is in an excellent situation, with a superb ocean view, and the building, which is picturesque and convenient, with piazzas a hundred feet in length, has been presented to the Society by Mr. D. Willis James. There will be a resident physician, and in addition to the large numbers going to the place for the day, parties of sick and convalescent children, with their mothers, will be kept for a week or more at a time.

Miscellany.

THE PRINCIPLES OF MODERN THERAPEUSIS.

From an introductory lecture by Prof. H. C. Wood, published in the *Philadelphia Medical Times* (May 31st), we make the following extracts:—

"The modern physiological school of therapeutics starts with the understanding that there is at present no known law of therapeutics, — unless it is that of antagonisms — by which is meant that it is possible, when a mass of living protoplasm is depressed by some agent, to overcome the depression by a second agent, which is stimulant to the protoplasm; or, in other words, that whilst some agencies increase the molecular movements of the protoplasm, others lessen them, and that it is at least theoretically possible to balance more or less perfectly one of these forces against the other.

"The great therapeutic departure of the last decade is the general abandonment of the statistical method of therapeutic research, and the substitution therefor of the so-called physiological method. According to the latter plan, disease is to be first studied in its natural history, so as to determine whether it has a definite course which cannot be arrested, and, if so, what is the progress of such course; whether the natural tendency of the disease is towards recovery or towards death, and, if the former, why this tendency is sometimes not fulfilled, — that is, how death is produced in the exceptional cases. If the tendency of a disease is fatal, then the study of the possibility of arresting the disease becomes a problem of great interest.

"Having, by studies of the character just glanced at, determined what is possible and useful to be done, the therapeutist next studies the drugs and remedial agencies at command. By investigations upon man and the lower animals he endeavors to learn exactly how these drugs act upon the human system, first in health and afterwards in disease.

"When he has by these two classes of studies learned, in the first place, what he wishes to do, and, in the second place, what he has to work with, he adapts his means to his ends by reasoning not different from that which guides the chemist, the engineer, or any one dealing with difficult force-problems. . . .

"The modern scientific therapeutist, knowing what he desires to do, studies his instruments. To do this he experiments upon animals, because the modern conscience refuses to allow of human vivisection. It has been over and over again denied that we can reason from the action of drugs upon animals to their action upon man; but it is not worth while, at present and in this place, to attempt to show in detail the absurdity of such denial. The whole evidence of modern science indicates that, at least in his animal organism, man is not a mysterious creature apart from the rest of creation, but is an animal having structural and chemical relations, within and without, similar to those of other animals. . . .

"Summing up into a sentence, it may be said that

the general principles which underlie rational therapeutics are to know what can be done and what it is desirable shall be done; then to know the means at command; and, finally, to adapt the means to the end.

"At present, the therapeutist is forced to supplement this principle by a pure empiricism, on account of the imperfection of our knowledge, not so much of the action of therapeutic remedies as of the nature of disease. We have no idea as to the nature of malaria, or of its immediate action upon the human organism; how, then, can we tell in what way quinine acts as a specific against it, — a fact which we abundantly know, empirically? The best therapeutic practice of to-day is therefore a mixture of science and empiricism; but the science has enormously increased in the last twenty years, and is advancing with arithmetical progression."

MRS. HOPKINS OF HARTFORD UPON CONNECTICUT.

MR. HOPKINS, the governour of Hartford upon Connecticut, came to Boston, and brought his wife with him (a godly young woman and of special parts), who was fallen into a sad infirmity, the loss of her understanding and reason, which had been growing upon her divers years, by occasion of her giving herself wholly to reading and writing, and had written many books. Her husband, being very loving and tender of her, was loth to grieve her; but he saw his error when it was too late. For if she had attended her household affairs, and such things as belong to women, and not gone out of her way to meddle in such things as are proper for men, whose minds are stronger, &c., she had kept her wits, and might have improved them usefully and honorably in the place God had set her. He brought her to Boston and left her with her brother, one Mr. Yale, a merchant, to try what means might be had here for her. But no help could be had. — *John Winthrop's History of New England*, vol. ii., p. 265.

EXCISION OF THE RECTUM FOR CANCER.

MR. HARRISON CRIPPS recently read before the Clinical Society of London[1] the notes of three cases of cancer of the rectum in which he had excised the lower part of the bowel, the operations having been performed respectively seventeen months, eighteen months, and four years ago. In the first case, that of a man aged sixty-eight, the symptoms had existed for two years. The disease consisted of a hard, irregular mass on the posterior and right wall of the rectum, about two thirds of the circumference of the bowel involved, the disease not extending more than two and three quarters of an inch from the anus. The lower three inches of the bowel were removed with the exception of about one fourth of its circumference on the anterior wall. The patient was much troubled during his convalescence from symptoms arising from enlarged prostate, but was discharged in a satisfactory condition so far as the bowel was concerned. At the end of a twelvemonth his medical attendant wrote that he was alive and comparatively comfortable; no return of the disease could be detected, but he was unable completely to retain his fæces. Mr. Cripps had examined this patient since sending in the paper, and found that he was suffering considerably from prostatic troubles. There was some hardness in this neighborhood, but no certain symptoms of recurrence. The second case was that of a lady aged sixty. The disease extended all round the bowel on the anterior wall, nearly as high as four inches. Mr. Cripps did not regard the case, from its extent, as a very favorable one for operation, but at the wish of the patient undertook its removal. The bowel had to be dissected for two inches from the peritonæum. The patient made a very satisfactory recovery. She suffered much from contraction, but there was no recurrence for more than a year; the disease then recommenced. The last case was that of a lady, aged forty, who was recommended to the author by Dr. Matthews Duncan. The disease consisted of a hard, ulcerated mass, involving one half the circumference of the bowel to a height of two inches, and filling the ischio-rectal fossa. The disease was removed in July, 1880, and proved, under the microscope, to be a typical example of adenoid cancer. The patient has been frequently examined since. She has completely regained her old strength and health, has no pain or discomfort whatever, and remains, after nearly four years, perfectly free from any symptom of recurrence.

The remarkably favorable results secured by Mr. Cripps were not in accord with those attained by a number of the speakers who took part in the discussion. The president, Sir Andrew Clark, in summing up, said that the discussion had shown that whilst excision of the rectum served to give relief for a time it did not tend to prolong life. He mentioned one case in which he had diagnosticated cancer six years before the patient's death. He considered that the limit of eighteen months, so frequently laid down in books, was not in accordance with general experience.

[1] Medical Times and Gazette, April 26th.

QUICK TIME ON SNOW-SHOES.

SOME question having been raised, says *Science*, in relation to the distance traveled by the Lapps of Baron Nordenskiöld's party in their excursion into central Greenland Mr. Oscar Dickson arranged for a series of races on *skidor* ("snow-shoes") at Quickjock in Lapland. The distance which they claimed to have traveled over the Greenland ice was two hundred and thirty kilometres, going and returning in fifty-seven hours. For this reason the courses were arranged so as to have a total length of two hundred and twenty-seven kilometres. The races took place on the 3d of April last, and were spread over six days. The following results were obtained: —

The first prize, three hundred and fifty francs, was gained by Pavo Lars Tuorda, one of those who had visited Greenland with Nordenskiöld, and who traveled over the above-mentioned distance, equivalent to one hundred and forty-one miles, in twenty-one hours twenty-two minutes, including all stoppages. The second prize was gained by Pehr Olof Ländta, who came in half a minute later. The third and fourth prizes were awarded for the times of twenty-one hours thirty-three and a half minutes and twenty-one hours and fifty-six minutes, respectively. Four others received a gratuity of thirty-five francs for having covered the dis-

tance in less than twenty-six hours. All arrived in good condition, unexhausted, and took part in the festivities which followed the races. Many of them had also traveled from seventy to a hundred kilometres before the race to get to the point where the course began. It will be observed that the result completely confirms the claims of the Lapps on their journey in Greenland as far as a parallel performance can do so.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 7, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York	1,340,114	630	254	18.56	15.04	3.36	5.92	1.60
Philadelphia	927,995	354	133	15.40	15.96	2.52	3.26	3 92
Brooklyn	644,526	241	90	18.06	16.38	4.15	3.36	2.94
Chicago	632,100	203	107	23.52	9.31	3.92	4.41	2.45
Boston	423,800	169	46	15.93	24.78	1.18	8.26	1.18
Baltimore	408,520	132	47	17.48	12.92	7.63	3.04	1.52
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	107	32	12.09	13.02	2.79	2.79	2.79
New Orleans	234,000	—	—	—	—	—	—	—
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	86	33	12.76	15.08	3.48	3.48	3.80
Pittsburg	180,000	72	34	23.63	—	—	11.12	1.39
Milwaukee	142,400	54	28	5.55	11.11	—	1.85	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	21	6	9 52	19.14	—	—	—
Nashville	54,400	13	4	—	15.38	—	—	—
Charleston	52,286	43	20	13.99	16.33	11.66	—	—
Lowell	71,447	20	5	15.00	25 00	—	—	15.00
Worcester	69,442	13	5	15.38	15.38	7.69	7.69	—
Fall River	62,674	34	16	8.82	8.82	—	2.94	—
Cambridge	60,995	20	5	15.00	25.00	5.00	5.00	—
Lawrence	45,516	11	4	18.18	18.18	—	18.18	—
Lynn	44,895	11	2	9.09	36 36	—	9.09	—
Springfield	38,090	14	3	7.14	21.42	7.14	—	—
Somerville	31,350	7	1	28 56	28.56	14.28	14.28	—
Holyoke	30,515	11	4	18.18	—	—	—	9.09
New Bedford	30,144	13	1	7.69	30.76	—	—	—
Salem	29,503	13	4	15.38	30 76	—	7.69	—
Chelsea	24,347	2	2	—	—	—	—	—
Taunton	22,693	12	4	25.00	25.00	—	8 33	8.33
Gloucester	21,400	3	1	—	33.33	—	—	—
Haverhill	20,905	—	—	—	—	—	—	—
Newton	19,421	1	1	—	—	—	—	—
Brockton	18,323	6	3	—	16.66	—	—	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	4	2	—	25.00	—	—	—
Fitchburg	13,433	3	0	—	—	—	—	—
Eighty-three Massachusetts towns	338,641	65	9	3.04	22.80	—	—	—

Deaths reported 2389 (no reports from St. Louis, New Orleans, Buffalo, and Providence): under five years of age, 906; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 394, consumption 377, lung diseases 225, diphtheria and croup 108, diarrhœal diseases 75, scarlet fever 53, measles 53, whooping-cough 29, typhoid fever 29, malarial fevers 13, puerperal fever 11, cerebro-spinal meningitis 10, erysipelas nine, small-pox four. From *measles*, New York 28, Chicago 14, Pittsburg four, Philadelphia, Brooklyn, Boston, Baltimore, District of Columbia, Fall River, and Taunton one each. From *whooping-cough*, Brooklyn eight, New York six, Philadelphia, Chicago, and Boston three each, Pittsburg two, Baltimore, District of Columbia, New Bedford, and Peabody one each. From *typhoid fever*, Philadelphia eight, Chicago five, Cincinnati three, Brooklyn, Boston, and Baltimore two each, New York, Milwaukee, New Haven, Charleston, Cambridge, Holyoke, and Wakefield one each. From *malarial fevers*, New York six, Baltimore three, Brooklyn two, Philadelphia and Chicago one each. From *puerperal fever*, Brooklyn four, Chicago three, Boston two, New York and Cincinnati one each. From *cerebro-spinal meningitis*, New York four, Philadelphia two, Milwaukee, New Haven, Fall River, and Salem one each. From *erysipelas*, Philadelphia four, New York and Boston two each, Brooklyn one. From *small-pox*, Pittsburg two, Philadelphia one.

In 100 cities and towns of Massachusetts, with an estimated population of 1,351,385 (estimated population of the State 1,955,104), the total death-rate for the week was 16.31 against 16.50 and 14.86 for the previous two weeks.

Cases reported in Boston: scarlet fever 51, diphtheria 32, typhoid fever six, and measles three; in Milwaukee, scarlet fever 15 and diphtheria seven.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending May 24th, the death-rate was 19.9. Deaths reported 3343: acute diseases of the respiratory organs (London) 261, measles 156, whooping-cough 138, scarlet fever 68, diarrhœa 46, fever 37, diphtheria 28, small-pox (London 17, Sheffield three, Liverpool two, Derby and Sunderland one each) 24. The death-rates ranged from 10.9 in Birkenhead to 28.1 in Oldham; Leicester 16.9; London 18.5; Bradford 18.9; Sheffield 19.3; Birmingham 20.6; Liverpool 21.2; Leeds 22; Nottingham 22.4; Manchester 25.1; Newcastle-on-Tyne 25.2; Blackburn 25.5. In Edinburgh 18.8; Glasgow 25.8; Dublin 23.8.

For the week ending May 24th, in the Swiss towns, there were 35 deaths from consumption, typhoid fever 19, lung diseases 18, diarrhœal diseases 18, diphtheria and croup seven, scarlet fever three, erysipelas two, whooping-cough one. The death-rates were, at Geneva 18.3; Zurich 15.8; Basle 22.6; Berne 14.4.

The meteorological record for the week ending June 7th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
June, 1884.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 1	30.370	50	57	45	80	80	62	74	W	E	N	2	12	7	C	C	C	—	—
Mon., 2	30.154	53	64	42	59	64	75	66	NW	E	NW	12	14	14	C	C	F	—	—
Tues., 3	29.894	65	78	50	72	71	73	72	W	NE	W	3	5	8	C	O	C	—	—
Wed., 4	29.984	70	83	60	84	57	64	68	NW	NE	W	7	8	11	C	C	C	—	—
Thurs., 5	30.078	75	89	63	75	47	67	63	W	SW	SW	7	9	9	C	C	H	—	—
Fri., 6	30.058	74	88	63	66	55	74	65	SW	SW	W	10	14	11	C	C	C	—	—
Sat., 7	29.995	76	90	64	78	42	73	62	W	W	SW	8	5	6	O	F	C	—	—
Mean, the Week.	30.046	66	78	55				67										0.45	0.03

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

LIST OF OFFICIAL CHANGES[1] IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JUNE 14, 1884.

AUSTIN, A. A., passed assistant surgeon, detached from U. S. S. St. Louis, ordered to Naval Rendezvous, Philadelphia.

EDGAR, T. M., passed assistant surgeon, detached from U. S. S. Wabash, ordered to U. S. S. Nantucket.

BALDWIN, L. B., passed assistant surgeon, ordered to U. S. S. Wabash.

WHITAKER, H. W., assistant surgeon, detached from Naval Rendezvous, Philadelphia, ordered for examination preliminary to promotion.

HESLER, F. A., assistant surgeon, ordered to U. S. S. Minnesota.

MEANS, V. C. B., assistant surgeon, ordered to U. S. S. Vermont.

BROWNE, T. M, medical director, to attend the International Health Exhibition at Liverpool, Eng., and delegate to International Medical Congress at Copenhagen, per steamer of July 2d.

TRYON, I. R., surgeon, to same duty with Medical Director Browne, and on completion of this duty to report for duty on U. S. S. Quinnebaug.

HUGG, J., surgeon, detached from Quinnebaug; on reporting of relief to return home and report arrival.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM JUNE 7, 1884, TO JUNE 13, 1884.

THE Army Medical Examining Board, New York City, is dissolved, to take effect June 14, 1884.

BROWN, JOS. B., lieutenant-colonel and surgeon. Upon completion of the business of the A. M. B., directed to comply with S. O. 44, current series, A. G. O., and return to New York City.

CLEMENTS, BENNETT A., major and surgeon. Directed to await orders in New York City.

KIMBALL, JAMES P., captain and assistant surgeon. Granted leave of absence for two months and fourteen days, to take effect June 14, 1884, and ordered to relieve, August 28, 1884, Captain Robert H. White, assistant surgeon, from duty at U. S. Military Academy, West Point, N. Y.

CAPTAIN WHITE, on being relieved, ordered to report in person to the commanding general, Department of California, for assignment to duty.

STERNBERG, GEORGE M., major and surgeon. Relieved from temporary duty in S. G. O., and ordered to assume the duties of attending surgeon and examiner of recruits at Baltimore, Md. S. O. 131, A. G. O., June 6, 1884.

FINLEY, J. A., captain and assistant surgeon. Relieved from duty at Fort Stockton, Texas, and assigned to duty as post surgeon at Fort Concho, Texas. Paragraph 4, S. O. 69, headquarters Department of Texas, June 2, 1884.

MIDDLETON, PASSMORE, captain and assistant surgeon. Leave of absence extended three months on surgeon's certificate of disability. Paragraph 3, S. O. 134, A. G. O., June 10, 1884.

BARNETT, RICHARDS, captain and assistant surgeon. Assigned to duty as post surgeon, Mount Vernon Barracks, Ala. Paragraph 2, S. O. 113, headquarters Department of the East, June 9, 1884.

GARDNER, EDWIN F., captain and assistant surgeon. Relieved from duty at Fort Walla Walla, Wash. Ter., and assigned to duty as post surgeon, Fort Canby, Wash. Ter. Paragraph 1, S. O. 75, headquarters Department of Columbia, June 3, 1884.

CUNINGHAM, T. A., captain and assistant surgeon. Ordered to relieve Assistant Surgeon C. B. Byrne, U. S. A., from duty at Fort Lewis, Col. Assistant Surgeon Byrne, when so relieved, ordered to proceed to Fort Gibson, I. T., and report to the post commander for duty. Paragraph 2, S. O. 112, headquarters Department of Missouri, June 4, 1884.

BANISTER, J. M., first lieutenant and assistant surgeon. Granted leave of absence for one month and seven days, to commence June 13th. S. O. 22, headquarters Division of the Atlantic, June 5, 1884.

MCCREERY, GEORGE, first lieutenant and assistant surgeon. Granted leave of absence for two months, with permission to apply to the Adjutant General of the Army for two months' extension. Paragraph 3, S. O. 56, headquarters Division of Missouri, June 5, 1884.

BOOKS AND PAMPHLETS RECEIVED. — The General Practitioner's Guide to Diseases and Injuries of the Eye and Eyelids. By Louis H. Tosswill, B. A., M. B., etc., etc. London: J. & A. Churchill. 1884.

A Glioma of the Right Eye spreading by Metastasis through many Periosteal Centres. By Julian J. Chisholm, M. D. Baltimore, Md. (Reprint.) 1884.

Department of the Interior. Bureau of Education. Preliminary Circular respecting the Exhibition of Education at the World's Industrial and Cotton Centennial Exposition. Washington. 1884.

Report on the Epidemic of Enteric Fever in Port Jervis. State Board of Health of New York.

Twenty-Third Annual Report of the Cincinnati Hospital to the Mayor of Cincinnati for the Fiscal Year ending December 31, 1883.

Proceedings of an Informal Conference of the U. S. Commissioners of the World's Industrial and Cotton and Centennial Exposition, etc. Washington. 1884.

Dartmouth Medical College. Eighty-eighth Annual Course of Lectures, New Hampshire Medical Institution. Hanover, N. H. 1884.

Notes on a Copy of Dr. William Douglass' Almanack for 1743, touching on the Subject of Medicine in Massachusetts before his Time. By Samuel Abbott Green, M. D.

A Treatise on Ophthalmology for the General Practitioner. Illustrated by Adolf Alt, M. D. Chicago, Ill.: J. H. Chambers & Co. 1884.

Health Hints for Travelers. By John C. Sundberg, M. D Philadelphia: D. G. Brinton. 1884.

Die Nanheimer Sprudel und Sprudelstrombäder von Dr. August Schott und Dr. Theodor Schott in Bad Nanheim. Separat-Abdruck aus der Berl. klin. Wochens. 1884. No. 19.

Original Articles.

SIX GENERIC DRUG MODIFICATIONS.[1]

BY HENRY M. FIELD, M. D.

"I CONCLUDE, therefore, of this and other medicines, as Thucydides of the plague at Athens, no remedy could be prescribed for it, *nam quod uni profuit hoc aliis erat exitio*; there is no catholic medicine to be had, — that which helps one is pernicious to another." — ROBERT BURTON.

WHAT Virchow calls the "mystery of individuality" continually confronts the physician in the prescribing of remedies. Other mysteries may, with growing familiarity, become less obscure; skill and confidence otherwise enlarge with use and experience, but the oldest and the wisest practitioner must still confess himself frequently baffled by the mysterious modifications which the individual constitution continually introduces into the operation of his most familiar remedies. "When," observes a recent writer, "we recall only a few of the minutiæ which must be taken into account, for example, the infinitely great difference in the distribution of blood-vessels in organs, the multiform arrangement of glandular tissues in glands, the deviations in innervation of organs, the difference in size of individual nerves, and in the distribution of nerve plexuses, the variations in the gross and in the histological construction of the same muscles in different individuals, we must confess that not only is our present ignorance great, but that it will always continue."

In this connection and of what has been well called anatomical idiosyncrasy, an observation connected with the ophthalmological use of atropia affords a good illustration. Instilled into the eye in whatever quantity, employed in collyria for however long a time, atropia should exert no influence beyond its local effect, and such is the general result of its use. There is, however, rarely observed constitutional implication, and this has been traced to an anatomical peculiarity. It is not any part of the salt absorbed from the eye that affects the system, but such portion of it as was taken up by the lachrymal ducts and so conveyed to the throat and stomach. "Susceptibility, therefore, to this mode of action stands in direct ratio to the width of the tear-passages. Proof of this statement is furnished, according to R. Liebreich, by those who have impermeable tear-ducts, and whose general condition is never affected, even by the largest doses used for a long period."[2]

Such are but a few, and these the more obvious and superficial, of the conditions which determine individuality. The problem has other elements at once more controlling and recondite, not easily expressed in words, but the reality of which is recognized by every thoughtful physician. "The possibility of explanation," says Virchow, "is no test of knowledge, for we know many things empirically whose causes we cannot comprehend. No exact investigation, either anatomical or physiological, pathological or therapeutical, has ever succeeded in lifting the veil which conceals the conditions governing individual peculiarities. In all times it has been regarded as the peculiar prerogative of exceptionally gifted spirits or of great experience to possess that subtle insight which enables one to recognize, even approximately, the specific character of the individual."

What may be called *indicia* of idiosyncrasy are greatly to be desired; such as past experience has possessed us of are at best few and uncertain. Jonathan Hutchinson has remarked that all persons of dark complexion bear mercurial treatment well and require larger doses than those who are fair; nay, more, that individuals of the former class may enjoy better health while taking mercury, "and are not infrequently much and permanently benefited by a long course." On the other hand, dark-complexioned people do not bear tonics well, they are apt not to be helped by sea-air; "the need of purgatives is greater in them." In those of fair complexion belladonna is observed to exert its highest power. Just as we know that acne is most liable to appear in individuals of a certain quality of skin and at a certain period of life, so we may expect that the iodides and bromides, pushed a little under these circumstances, will produce characteristic cutaneous eruptions. Finally, we know — and a most unhappy piece of knowledge it often is — that it is just in the constitution which most needs the staying and tranquilizing influence of opium, that is, in the hyperæsthetic and neuralgic female, that its anodyne and hypnotic virtues are most apt to fail us, while in such systems it may play the rôle of a veritable fiend.

The hope that what experience did not impart, an *a priori* method of studying and reasoning might supply, naturally a product of the deductive philosophy of an earlier age, was doubtless directly concerned in the determination of temperaments by the ancients, an effort towards specific knowledge in the direction of individualism. And it must be admitted, though their terms be far from scientific, we all of us still find them very convenient. Indeed, the attempt at classification in individuality has not been wholly resigned to the contemporaries and successors of Galen and Paracelsus; and it is hardly more than twenty years ago that so prominent a practitioner as Dr. Laycock wrote quite exhaustively upon the subject. It is doubtful, however, if we are made any better off for his six temperaments than for the four we had previously. Such studies have their value in our scientific age, when the minds of men are so generally given to the pursuit of the demonstrable and of that alone which is capable of strict definition. Once that the disease were determined it is not at all sure that the practitioner trained in the school of Laennec would treat a pneumonia better than would he who was taught in the school of Hippocrates; and quite likely the latter would be nearer right in prognosis. Just here is suggested a danger that we may lose much as medicine makes its transition from art to science. The "gifted spirits" of Virchow are not the anatomists or the pathologists, they are not of necessity the clinicians, full men though they may be, and exact in the practical knowledge of hospitals and schools; they are rather those who, some way, find the largest success in the treatment of disease, whose wide range of therapeutic resources is both intuitive and acquired, whose sense, aided or not by instruments of precision, looks deeper and sees farther than that of other men, who wrest secrets from nature, and, in the language of the French proverb, are concerned "not with sicknesses but with the sick." It was a good pathologist who gave three good reasons why his patient could not get well, but it was a better doctor who, against all reason, rescued him.

[1] Annual Address delivered before the Middlesex South District Medical Society, at Cambridge, April 16, 1884. Published by vote of the Society.

[2] Lewin.

The occasional extraordinary behavior of quinine affords a good illustration of what we mean by idiosyncrasy. We do not now refer to what has been called quinine poisoning, a condition which may accrue from quite small doses, and which is variously characterized by determination of blood to the head, œdema of the face, itching of cutaneous surfaces, great excitement, and even delirium, followed by extensive desquamation. This pertains to individuality, but it has been well described in certain cases published in the journals and the books. But in the exceptional condition now in mind quinine acts in a way the exact opposite of its otherwise observed and characteristic action. Intrinsically a corroborant, a dynaphor, as the French conveniently call it, that is, a force-begetting, force-imparting remedy, it now acts to prostrate and overwhelm. The patient complains of increased weariness; there is trembling of the hands, unsteadiness of gait, a feeling of great weakness in the legs, more or less complete, and perhaps extreme, suffusion of perspiration, with conjoined depression of spirits, melancholy, impaired mental power, etc., etc. Such syndroma, which, in another and otherwise caused, quinia should be calculated directly to antagonize, to relieve or lift altogether, follow so soon after the ingestion of the remedy, and are so surely aggravated by successive doses, that soon, it may well be, both physician and patient are brought to suspect the source of the mischief.[1]

A somewhat prevalent misconception or inadequate knowledge among the profession upon the general subject of quinia incompatibility is well illustrated by remarks of Dr. David Young, of Rome, in a recent article contributed to the *Practitioner*. He speaks of a "belief on the part of many patients, a belief also shared in by not a few eminent physicians, that they cannot take quinine in any form or dose; and I have met with such patients in Italy," continues the doctor, "who told me they were advised by their own medical men at home to assure any physician whom they might have occasion to consult that they could not take quinine." He suspects that there is a "physiological reason" for this fact of intolerance, and that "ere long investigation will discover what this reason is," and proceeds to remark upon the "curious fact that the same wide-spread belief exists in regard to the use of iron." The illustration is an unfortunate one; the analogy cannot be maintained, for the fact is, as I conceive it, that iron intolerance, when presented, is, indeed, almost invariably due to a "physiological reason," a temporary physiological condition which it is for the physician to estimate and remove; for example, a state of pyrexia, of biliousness, a failure in selection of the right pharmaceutical preparation, or in determination of the right dose; whereas quinine intolerance, when it exists, is an established fact, and has its source in the very nature of the man, or, in a word, is what we have recognized it to be, a phenomenon of idiosyncrasy.

[1] I am glad to find, in Hutchinson's Pedigree of Disease, the recognition of a principle which I learned, some time ago, to apply in my own practice, especially in respect of the present material, but which I have not seen stated elsewhere. "It by no means follows," he remarks, "that because a patient has an idiosyncrasy against some drug we ought wholly to abstain from its use. Rather this susceptibility proves, in the majority of cases, that in him minute doses will effect the cure as efficiently as larger ones in others." He instances tertiary syphilitic ulceration cured by one third to one half grain doses iodide potassium. I have applied this method in malarial seizures, and accomplished full medicinal purpose with one half to two grains quinine, and at the same time avoided unfortunate physiological impression.

Iodine, as misdirected by individual constitution, is a not infrequent occasion of surprise, annoyance, or aggravation. For this we may perhaps be partly prepared when we consider the wonderful power of this drug to penerate the system, the wonderful speed of its circuit, and the extraordinary range of its possible elimination; a threefold quality which may well bring it into collision with a lurking idiosyncrasy. Ingested into the stomach as metalloid or salt, the promptitude with which it may be rendered in the renal flux or returned in the saliva is familiar to every physiologist. I have, at least on two occasions, had patients to whom I had made application of a few drops tincture iodine, upon absorbent cotton by shielded applicator to the interior of the uterus, declare that iodine had been used because it was tasted in the mouth. Hardly more than three minutes — and surely not five — had elapsed before this impression was made. Here the area of absorption must have been confined to the endometrium, none of the remedy having come in contact with any part of the vaginal wall.

The inherent power which every active remedy has to exert desirable and undesirable properties at the same time is also well illustrated by iodine as modified by individualism. Lewin's experience is here to the point: "Given for the purpose of producing a diminution in volume of hyperplastic glands, as the cervical lymphatic or the thyroid, etc., it produced the desired effect and at the same time a serious atrophy of glands previously healthy, as the mammæ or testicles." Iodine, like opium, may accomplish the purpose of its exhibition, but in so malignant a way that the relief afforded costs seriously through the discomforts it imposes. This is well illustrated by the experience of a patient of mine, a young medical man, who had found in iodide of potassium a complete, and the only effectual remedy for a painful asthma. The drug, however, produced synchronously such a degree of lachrymal and nasal catarrh, such a persistent foul taste in mouth and foul odor of breath, that the victim of idiosyncrasy, after repeated unfortunate trials, gave up all treatment and resigned himself as patiently as he might to his old enemy.

Iodide is so prolific in individual constitutional disturbances that we leave the subject with reluctance, but can give space for but little further remark. The power which idiosyncrasy, indeed, may assert in this connection is well shown by Hutchinson's observation, who has repeatedly seen doses of only half a grain produce definite symptoms of poisoning in the course of a couple of days; and yet has known a patient to swallow one and a half ounces a day of the best Apothecary Hall iodide for a week together without any especial effect except the production of a degree of lassitude.

The morphology of skin eruptions, under varied constitutional iodism, presents a wide range, and may obtrude problems hard to solve. In one instance an infant was treated for small-pox by "an experienced and sagacious surgeon," and kept carefully quarantined for a month, — to present in the end only a case of iodide of potassium poisoning. A man was treated in hospital for syphilis, pretty surely killed by iodide of potassium, and then declared never to have had syphilis at all. Such experience as this is calculated to enforce the eleventh aphorism of Arnoldus, which asserts that the "wise and conservative physician never hastens to have recourse to medicine *nisi necessitate cogente*."

The misinterpretation which follows has its amusing side. In 1862 the dermatologist Bazin, of Paris, published a description of a new form of skin disease, for which he proposed the name "*hydroa*." Other observers followed with similar accounts. Later, an authority objected both to the term and to the claim of novelty, and pronounced the disease a variety of "urticaria bullosa." It was not till some time after 1870 that proof was afforded that all were alike at fault, and in "hydroa" was recognized only an extraordinary idiosyncrasic sport of iodine.[1]

One illustration more. It has been lately pointed out by a French author that the medicinal employment of the oil of turpentine may occasion a condition of the kidneys which causes the urine, on chemical examination, to simulate albuminuria. This fact is alluded to in my recent monograph on The Balsamics, and a simple device given by which the error can be set aside. In a volume of papers by Dr. Seguin of New York, — Opera Minora, — published the present year, a corresponding charge is brought against iodide of potassium as respects microscopic examination of the urine. He reports three cases attended by conditions which warrant the statement that iodide of potassium "may give rise to the formation of hyaline and epithelial casts without (there being) albuminuria or other rational symptom of Bright's disease." This, so far as I know, is the latest observed — as well as one of the most singular — freaks of idiosyncrasy in the conduct of this versatile drug.

(*To be continued.*)

SEWAGE SYSTEMS AND THE EPURATION OF SEWAGE BY IRRIGATION AND AGRICULTURE.[1]

BY HENRY J. BARNES, M. D.

DANTZIC, situated about three miles from the Baltic, on account of pollution of its harbor at the mouth of the Vistula, constructed a sewer to discharge on a sandy island having little or no soil, where the occasional tufts of grass were frequently covered with sand carried by the wind. As a result the island is now in a high state of cultivation. In some tracts the land rents to peasants at from twenty to thirty dollars per acre. The frosts of winter do not interfere with the successful operation, as the water delivered by the sewer melts the snow and ice, so that it finds its way into the ground quite as well as in summer, and without injury to the slumbering vegetation. Odessa, Breslau, and Florence also have sewage farms. M. A. Durand-Claye, from whose reports this information is derived, says that "in Germany it is admitted without question that municipal healthfulness depends upon three principles: first, the total discharge of water-closets in sewers; second, the distribution of an abundant supply of water in dwellings, and frequent flushing of drains; third, the purification of sewage by soil and vegetation."

In England there are two hundred cities and towns disposing of sewage by irrigation and agriculture. On the farms at Edinburgh are located beautiful nurseries for the children of the city. At Lochend a farm taking sewage from this city has produced $200 worth of hay per acre. The Metropolitan Sewer Company of London rents land at $100 per acre for grazing. Sixteen acres at Rugby furnish feed for fifty-four head of cattle, and at Aldershot, Branbury, Bedford, Croydon, Norwood, Warwick, and Worthing the reports in detail show an equally wonderful production from the land treated in this manner.

Leamington, with 26,000 inhabitants, spent $40,000 in chemical experiments, after which the A. B. C. Company in 1869 attempted to purify the sewage, but gave it up in 1871. It was then allowed to flow into the River Leam. A lawsuit followed, costing the city $25,000, in which it was defeated, and compelled at an expense of $7500 more to purify the river. Lord Warwick then consented to receive the sewage on his estate, the city contracting to deliver it at the highest point of the farm for a period of thirty-two years, for which Lord Warwick engages to pay $2250 annually. The sewage amounts to a little over 1,000,000 gallons per day, and is distributed over the land, which has not been leveled, by what is known as the "donkey back" system, — elevated open drains, on the sides of which is the vegetation. It has transformed the poorest parts of the farm into soil of much fertility, and financially has proved a great success. From eight to nine cuts of Italian rye grass two feet high are made each year. Celery, strawberries, and currants grow remarkably well. The beef, milk, and butter are in great demand and bring the highest prices. The laborers are in the best of health, and Lord Warwick has received numerous prizes and silver cups for one of the best kept farms in the kingdom. A more detailed account may be found in Babut du Maris' work.

The sewage farm at Croydon is surrounded by beautiful villas, it being a fashionable resort. The land which twenty years ago sold for $300 per acre is now worth from $2,000 to $5,000. There has been but one complaint of the farm during the past twelve years, and this resulted from excessive irrigation during a long period of stormy weather, when the hay could not be dried on the land.

A public footpath crosses the sewage farm at Abingdon. There has been no complaint from bad odor.

Babut du Maris says, "It has been claimed that prolonged irrigation will produce disease by the presence of bacteria in the sewage. Experience is to the contrary. The farms at Edinburgh have received sewage for more than two centuries, that at Buntzlau for two and a half centuries, and for more than ten centuries this has been in practice in China. Vegetation has never ceased to be vigorous and healthy, and the inhabitants have never been known to suffer in consequence of irrigation."

I am informed by a gentleman who has resided seven or eight years in China that in all the large cities the detritus is carried into the suburbs by hand buckets and deposited on the land for the benefit of vegetation, and in many instances the same pails serve to bring back drinking water, with no ill effect except in a few northern cities, where the sewage is put on the leaves of vegetation; there the tape-worm is very common. Dr. Williams, in his work entitled "The Middle Kingdom," does not include typhus, typhoid, scarlet fever, or diphtheria in a list of the prevalent diseases of China.

[1] Hutchinson remarks of this drug and of its derivatives: "Not even the syphilitic virus itself is capable of producing a greater multiplicity of pathological changes in the integument. Now it is a hæmorrhage, now a thrombosis, now an erythema, now a bulla; the commonest of all forms is an acne; but in addition to it and to those I have named we may have, at the same time, pustules, button-like tubercles, and in aggravated cases enormous soft tuberous growths."

[1] Concluded from page 580.

It is difficult to make comparisons or draw conclusions when considering this question financially, for the paramount objects to be attained vary in different communities. One town may seek only to get rid of the sewage, another its most profitable employment on the land, another relief from the pollution of a water-course or preservation of its navigability; grotesque and unprofitable experiments and local conditions all contributing to make balance sheets of great diversity in showing either profit or loss. Many examples of each are available, and should of course be carefully studied.

The city of Paris, for many years harassed by constant complaint and litigation as a result of discharging sewage in the Seine, some years since established sewage farms on the plains of Gennevilliers, the history of which is told in a report to the municipal council by the sixth Commission appointed to treat with the state for the concession of such public lands at Achères as are necessary for the epuration of the sewage by irrigation and agriculture.

Before the execution of the measures conceived by M. Belgrand for the general healthfulness of Paris, the rain water and the washings of the streets flowed into the Seine, either directly, or by a great number of drains emptying on the quays of each bank the whole length of Paris. This mode of drainage resulted in the immediate and pronounced pollution of the river, which reached the maximum at the point where it leaves the city. The work of Belgrand had for its result the concentration of four fifths of the drain water in a large sewer opening into the river at Clichy while the remainder was discharged at St. Denis. At the same time the water for domestic supply was largely increased. In 1860 30,000,000 gallons per day were furnished for this purpose; in 1882 92,000,000 gallons were required each day, or 34,020,000,000 gallons per year. This, with the rain water which falls on the city, estimated at from 9,576,000,000 to 11,340,000,000 gallons, makes a total of 44,100,000,000 to 45,360,000,000 gallons, which, were it not for evaporation and other loss, should be carried by the sewers. This loss amounts to something like 18,900,000,000 gallons per year as indicated by gauges in the two sewers, which register 26,208,000,000 gallons, — about 42 per cent. disappearing by evaporation. At low water of the Seine it is equal to one part of drain water to twenty of river water, and at high water to one part in 350. As a result of currents and obstacles in the river, mixing did not take place; and the right bank — the most densely peopled — received on a very long margin the totality of the drain water, depositing all the way organic matter brought in suspension. Protestations from people living along the right bank of the river followed very closely the opening of the two great sewers; and the state government required the city of Paris to seriously consider methods of purifying the sewage before discharging it into the river. The savants, engineers, chemists, traders, and agriculturists discussed the subject in all its phases, and to the latter we are indebted for a practical solution of the problem.

Filtrage was naturally the first system to be tried. It was soon found that, besides the actual difficulties of filtration on so large a scale, this mode of treatment had the capital vice of leaving in the water soluble organic matter capable of fermentation, and later, chemical agents were resorted to with the object of precipitating the soluble matter, but only incomplete results were obtained, which were slow, costly, and inapplicable on so large a scale.

We now come to the experiment which after fifteen years of study and persevering effort has given a result most complete and satisfactory. Epuration and utilization by agriculture, and filtration by spreading the sewage on permeable land have accomplished this end. It is based on simple principles, of which the demonstration is now made. All argilo-silicious and permeable soils, sufficiently thick and well drained, have the property of retaining in their superior layers all the organic matter in suspension and solution contained in drain water spread on the surface of the land. Such soil can receive without being made damp or marshy one inch of water per day, or twenty-six feet per year. It transforms the retained organic matter, rendering it capable of assimilation by plants. A very ingenious experiment just made shows this valuable property in the vegetable mould. A hollow column two metres in height was filled with earth in a manner to reproduce exactly the soil as found at Gennevilliers. Through this was passed sewage in a relative quantity to that employed in irrigation and at equal intervals with its use on the land. Epuration took place as completely as in the natural earth. Chloroform was then passed through the column, which at once arrested epuration, and the sewage traversed the column without being purified. Paralyzation of the infusoria stopped oxidation of the organic matter. This experiment has been demonstrated by M. Schloessing, and is described in the report to the Council of Hygiene. If the surface irrigated is under cultivation the fertilizing matter is immediately utilized; if not, it accumulates without loss and transforms the poorest soil into land of extreme fertility.

A very large proportion of the water used in irrigation is evaporated either directly or by the plants in vegetation. The residuary water coming from the subsoil drains is of a remarkable purity, and does not suggest either by aspect or composition the sewage from which it proceeds. Irrigation is the most economical and efficacious means of conveying directly to the plants the fertilizing matter of sewage.

Trusting in these principles, and fortified by the works of Messrs. De Freycinet, Schloessing, Marié-Davy, and Frankland, the engineers of the municipal service have, since 1867, pursued studies and made experiments for which, notably since 1872, the council has furnished a large amount of money. These efforts have had as a result the great and actual demonstration at Gennevilliers, which evidence impresses favorably all unprejudiced persons who take the trouble to visit the lands.

After some experimental cultivation at Clichy in 1867 and 1868 the irrigation of the plains of Gennevilliers was begun in 1869 by Messrs. Mille and Durand-Claye. In 1870 and 1872 the territory comprised but a few hectares. It has increased each year, until now over 500 hectares are thus employed (about 1200 acres, which receive nearly one fourth the sewage of the city). In the beginning the water distributed was limited to a few thousand cubic metres. In 1872 444,000,000 gallons were used. In 1881 4,685,000,000 gallons were discharged on the land. In May of this year (1881) 684,300,000 gallons — 22,050,000 gallons per day, or 44,100 gallons per hectare per day — these plains absorbed. In 1882, at the time of the report, the distribution reached 34,020,000

gallons per day, or 79,300 gallons per hectare, which represents a sheet of water spread over the surface equal to a little over one inch per day.

The progress, the slowness of which astonishes us now, has not been obtained without difficulty. At the origin, the engineers, relying too much on the very great permeability of the land, had not thought it necessary to establish subsoil drainage. The natural drainage, in consequence of an abundant irrigation, was found insufficient. The level of the subsoil water rose; a few cellars were flooded at Gennevilliers, and gravel quarries were inundated. This was sufficient excuse for a claim for excessive damages against so rich a victim as the city of Paris. To increase the indemnity and to compel a compromise, all possible arguments were employed. Doctor was opposed to doctor, and hygienist to statistician, when it was only a question of a few thousand francs damage to the claimants. These demands were opposed by the engineers, who in turn were very decidedly sustained and supplied with money by the municipal council. The necessary work to insure the drainage of the plains and to remove all pretext for damages was done, and to-day the complaint is rather of the lowering of the subsoil water. Nevertheless irrigation at Gennevilliers created a prosperity until then unknown, and a time arrived when the community, frightened by the possible result of its demands and outcries, — which threatened to be the suppression of irrigation, — asked for a contract, the principal article of which was that the city should engage to continue irrigation on the plains of Gennevilliers for twelve years.

The efficacy of this system of epuration is manifest, and presents a brilliant proof. The effluent drain water has fewer micro-organisms than the water of the Seine when it enters Paris. It has the purity of spring water coming from the earth. To demonstrate the utility of the system as applied to agriculture has been slow and difficult, and not less laborious than to test the efficacy of the epuration.

The slowness of experiments in agriculture may be understood when we remember that to reach an end we must go through all the phases of vegetation, from the sowing of the seed to the harvest. Under our climate it is a campaign of a year. If we neglect a detail, if we make a mistake at the time of sowing or planting, at the time of plowing or watering, the harvest may be a failure, and we must begin again. The difficulty was increased by local circumstances. Amongst the cultivators of land in the suburbs of Paris, no one knew the practical working of a sewage farm. One of the persistent workers who has been rewarded by success said recently that it required more than four years to acquire the necessary knowledge. To-day the cultivators are in complete possession of their art, and in the recent horticultural exhibition every one admired the remarkable products, which received honorable distinctions.

In agriculture, successes which would be shown by beautiful samples obtained in the fields of experiment would be objects of curiosity. It is necessary to secure economical results, and these go far beyond the utmost expectations. For the landlord of the soil the rent value of the hectare has increased fivefold, from ninety to 450 francs. For the farmer or cultivator the prosperity has not been less. The net value of vegetable products rose from little or nothing to 4000 francs per hectare.

In a sanitary point of view the results have not been less satisfactory, and here again it is necessary to observe the facts on the ground. One sees a numerous population, robust and healthy in proportion to its prosperity. Its vigor assures a healthy nutrition equivalent to its works, which is the best hygiene.

As to the effects of irrigation, the same occurs at Gennevilliers which always takes place where irrigation is practiced: from the moment it is made frequent, without stagnation, and at regular intervals, a condition which is far from favorable for the development of paludal influences. The determining causes are eliminated; a constant activity is maintained in the vegetable life, which absorbs in its circulation all its own residues and all the organic elements placed within reach. Highly to the honor of the city of Paris be it said that, by the perseverance of its representatives, by the science and devotion of its engineers, the problem of epuration of the residues of cities and of their utilization by agriculture is absolutely and definitely solved. We have no longer the experiment of Gennevilliers; we have a system permanent and regular for the future.

The population of Gennevilliers has increased by farmers coming to occupy the lands thirty-four per cent. in ten years.

Among the city documents of Paris lately presented to the city of Boston, and placed in the Public Library, may be seen photographs of the departments of this branch of the municipal service, as well as of the products of the land. The commission, in recommending the acceptance by the city of the terms which the state proposes for the extension of the work so as to include the sewage of the entire city, recommends a municipal ordinance which shall require all the water-closets in the city to be connected with the drains, and an absolute abandonment of cess-pools, which now are so common in Paris. Up to the present time the city has declined to accede to the terms of the state, as they are deemed too exacting, and require a very large amount of money for the purchase of the land. The success of epuration by this method is not questioned. The work of Babut du Maris, lately published, says "the city has just obtained 2500 acres for the extension of the sewage farm."

The highly satisfactory operation of this system at Dantzic, where the rigorous climate of winter is as great an obstacle to overcome as here in Massachusetts, is sufficient proof that frost is not an objection to its employment on our soil. The land freezes four feet deep at Dantzic. The Vistula is frozen over from the middle of November to March, yet the temperature of the sewage at the mouth of the sewer never goes below 37° F. Irrigation is continued throughout the year with quite as much success in epuration in winter as in summer, although vegetation flourishes but four out of the twelve months.

Sewage in freezing, says Babut du Maris, eliminates its dissolved fertilizing material as thoroughly as salt water eliminates salt by the same process.

There must be abundance of land in the valley of the Blackstone, the Merrimac, and the Connecticut suitable for farms of this character. There is land bordering on Lake Cochituate well adapted to farming, for the protection of the lake from the sewage of Pegan Brook. In Arlington, Belmont, and Medford are vegetable farms favorably located, and soil well suited to this system; and before this community embarks in a scheme to build a metropolitan sewer from Natick to

tide-water, which when finished will be of doubtful utility, judging from the experience of London, this system should be tested, with the object of requiring each and every community to take care of its own sewage.

We have in the soil a chemical laboratory, a perfect filter, oxidation, vegetation, the influences of animal life and the infusoria combining to protect the subsoil water, and so far as experience goes or chemical analyses can demonstrate, these processes of nature are amply sufficient.

We do not hesitate to cover with fertilizing material fields in which are located springs and wells. We are only solicitous lest the surface water should convey the material to them, and we raise an embankment above the level of the surrounding land, and otherwise leave to nature the protection of our drinking water with full confidence in "*vis conservatrix naturæ*," and if her processes are not complete and perfect the whole world is gradually becoming saturated with filth.

PROGRESS IN DENTISTRY.[1]

BY WILLIAM HERBERT ROLLINS.

D.

1. — PYORRHŒA ALVEOLARIS.

Many theories have been advanced to explain the origin of this disease. A. Witzel, in a paper read before the German Dental Association,[2] states that the disease is not an ulceration of the gum or a primary inflammation of the dental periosteum, but is a caries of the dental alveoli, caused by a septic irritation of the medulla of the bone. He advises extraction of all teeth where the sockets have been destroyed for one half their length. The other teeth are to be thoroughly cleaned, and a strong (?) solution of carbolic acid (one to one hundred) is to be injected into the pockets by means of a syringe.

2. — CAUSES OF CARIES.

The most important investigations recently made to determine the nature of decay in the teeth are those of W. D. Miller. He finds that the dentine when attacked by decay shows, even in the deepest layers, a loss of lime salts. This loss is a real solution by acids, and cannot be accounted for by the action of any agent which affects only the organic matter of the teeth. This view of the matter is contrary to the statements of the editor of the *New England Journal of Dentistry*, who found that the lime salts were but slightly diminished, and that no lime in combination with organic acids could be found in decayed dentine. He therefore reasoned that acids played no part in decay. Miller, in support of his view, has made many thousand experiments and cultures, a brief outline of which may be of interest. He put some starch into a small tube, which was tied to a molar tooth, and kept in the mouth over night. In the morning the contents of the tube were acid. Both the starch and the tube were sterilized before placing in the mouth. The same result occurred in a mixture of fresh saliva and starch out of the mouth, but if the mixture of starch and saliva were heated to 100° C. it did not become acid. The ferment, therefore, existed in the saliva. To determine whether it was organized or unorganized the saliva was shaken in a test tube with sulphuric ether, starch was then added, and the mixture put in an incubator. After a few hours sugar could be found, but no acid. The acidity found in the first experiments must, therefore, have been due to an organized ferment (fungi). A mixture of saliva and grape sugar was exposed to a temperature of 67° C. for twenty minutes. In a few hours it became acid. This confirmed the previous experiment, as the ptyaline must have been killed by the heat, so the acid could only have come from the germs present in the mixture. A perfectly sterilized mixture of saliva and sugar was exposed to the action of a piece of decayed dentine the size of a pin-head. In a few hours it became acid. A drop of this mixture infected other sterilized solutions. This could be carried on indefinitely. It was, therefore, evident that the ferment had the power of reproduction, which was an additional proof that it was an organized body.

To determine the nature of the acid fresh saliva was mixed with starch, and allowed to ferment. The mixture was then filtered and heated to 100° C. The filtrate was evaporated to concentrate it. A few drops of it added to methyl violet did not change the color. The remainder of the filtrate was shaken with sulphurous ether. When the ether became clear it was distilled. A portion of the residue was found by a polaris trobometer to be optically inactive. The remainder was mixed with oxide of zinc, boiled and filtered. Crystals of lactate of zinc were found in the filtrate.

To see if the fungi were capable of producing caries out of the mouth pieces of dentine were placed in a mixture of sterilized saliva and starch, which was then infected with a pure culture of the fungus found in the deepest layers of decayed dentine. When these pieces were afterwards examined under the microscope it was found impossible to distinguish them from dentine affected by natural caries. Miller thinks he has shown that caries is due to a fungus which generates lactic acid, the acid acting on the lime salts. When these have been dissolved other germs finish the work by destroying the organic basis of the dentine. Among these latter germs bacterium termo is always present.

Underwood and Milles, who have been investigating the same subject, also consider that germs play an important part in caries. They do not think Miller's investigations reliable, because they have always found that no invaded tubule in carious dentine contains more than one form of fungi. If cocci are present in one tube they are never mixed with threads or bacilli, though either of these forms may be present in adjacent tubes. They state that Miller in figuring several forms in the same tube has proved his ignorance of the nature and methods of growth of these organisms. Their experiments do not seem, however, to have been made with the same amount of care that Miller has shown, nor have they reached any very definite conclusion.

3. — COURSE OF CARIES.

According to Miller starch and saliva at the temperature of the body become acid in a few hours. Therefore in every mouth acid is generated, and capillary attraction will draw this into the minute pits and fissures of the enamel. The extent to which the acid will act depends directly on its strength, and inversely upon the density of the tooth. The superficial layers of dentine completely lose their lime salts. The same

[1] Continued from page 584.
[2] New England Journal of Dentistry, May, 1883.

is true of dentine in bread and saliva out of the mouth. The destruction of the organic basis of the dentine soon follows the solution of its lime salts, and is caused by germs. The fungi of the mouth do not directly decalcify dentine; they do this through the lactic acid, which is generated from sugar and starch.

4. — DISEASES OF THE EYE PRODUCED BY CARIOUS TEETH.

Dr. Galezowski mentions [1] several diseases of the eye caused by dental irritation. They are reflex asthenopia, reflex kerato iritis and irido choroiditis, reflex mydriasis, and spasmodic contraction of the lids and of the oculo motor muscles.

5. — SYPHILITIC INOCULATION FROM A DENTAL INSTRUMENT.

Dr. J. T. Tripp reports [2] a case. Though seldom mentioned, such cases are probably not rare. They show the great importance of keeping all dental instruments perfectly clean, for not only syphilis but other diseases may be contracted in this way. If every dentist would make it a rule never to use an instrument which was not perfectly bright the danger would be much diminished, as the care required to keep the instruments in this condition would be pretty sure to make them incapable of inoculating.

6. — REFLEX IRRITATION FROM DENTAL CARIES.[3]

For four years the patient, a young girl, was attacked once a week with violent contractions of the muscles on the left side of her face, the head at the same time being drawn down to the shoulder. These contractions had produced a great prominence of the muscles of the affected side. On extraction of a decayed molar the contractions ceased.

7. — CONGESTION OF TONGUE CAUSED BY CELLULOID.

Dr. Brownlee reports [4] a case. The palate, lips, and cheeks in contact with the celluloid were highly congested. The tongue was much swollen, deeply grooved, and bright scarlet. The pain was constant and increasing. No treatment was given except to make a new set of teeth on rubber instead of celluloid. The parts returned to their normal condition in a few weeks.

E.

1. — LIME IN THE TREATMENT OF SENSITIVE DENTINE.

P. Calvo recommends the following treatment: First dry the cavity, then put in fresh, dry lime and seal the opening. In this way the action of the lime extends over some time so that it does not give rise to pain as it will do if water is allowed to come in contact with it immediately. He states that the dentine loses its sensibility without any risk of injury to the pulp.

2. — SODIUM CARBONATE IN TREATING ROOT CANALS.

Dr. Kirk packs the root canal and pulp chamber with the salt in powder, and then fills the remainder of the cavity with a temporary filling. After a few days the latter is removed, and the soda washed out. The canal will then be found perfectly free from odor.

[1] British Journal of Dental Science, page 73, 1883.
[2] British Journal of Dental Science, page 77, 1883.
[3] British Journal of Dental Science, January 1, 1884.
[4] British Dental Journal, January, 1884.

3. — MENTHOL IN THE TREATMENT OF INFLAMED PULPS.

A saturated solution of the crystals in alcohol has been found of value as an application for the relief of pain caused by exposure of the pulp. Its use in pyorrhœa alveolaris has also been recommended in the form of an injection into the pockets formed between the root and its periosteum.

4. — NITROUS OXIDE AND OXYGEN.

The suggestion of Paul Bert to use a mixture of nitrous oxide and oxygen to prolong the effect of a primary inhalation of nitrous oxide has been found of value.

5. — ACTION OF ARSENIC ON THE DENTAL PULPS.

Bödecker has studied the effect of this much-used pulp destroyer, and has published his results.[5] Witzel had stated that arsenic was an admirable agent in the treatment of suppurating pulps, the upper parts of which were excised after the application. He said the body of the pulp remained healthy, and that the treatment was a valuable one. Bödecker tried it, but finding it unsuccessful made a series of experiments, of which the following is an abstract: Holes were drilled into the dentine, taking care not to reach the pulp chamber. A layer of sound dentine was, therefore, present between the arsenic and the pulp. The teeth were extracted in from three to six days after the application. They were then immediately opened and put into the proper reagents. An examination of the nerve fibres showed that the myelin was separated into irregular masses. When the arsenic had acted for six days he found a granular substance in the fibres, which was colored by rose aniline. All vestiges of the myelin had disappeared, globules stained black by hyperosmic acid taking its place. Viewed under the microscope the dentine tubes in sections, stained with hyperosmic acid, showed, in the vicinity of the hole in which arsenic had been placed, much enlargement. They were filled with irregularly-shaped, black bodies, which were supposed to be altered fibrils, because in following up a tube containing them he found the dentine fibres less changed as they receded from the centre of inflammation. The increase in the diameter of the tubes had taken place by an invasion of the basis tissue, which had also lost part of its lime salts.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

MEDICAL SERVICE. UNUSUAL CASES OF SCURVY.

REPORTED BY R. T. EDES, M. D.,
Visiting Physician.

The British ship Earl Granville sailed from Iloilo, around the Cape of Good Hope, on August 4th, with a crew of thirteen men, beside five who messed in the cabin. There occurred on board several cases of a peculiar character, three of which were sent to the Boston City Hospital, and seem to be of sufficient interest to be reported.

It will be noticed that the dates given by the hospital books, which represent the statements of the patients themselves, do not agree with those taken from

[5] Dental Cosmos, October, 1883.

the ship's log. The latter undoubtedly mean, not the beginning of the sickness, but the days on which the patients became too sick to work.

The food, as required by the scale of provisions in the articles of agreement, is said to have been good and abundant. The water was good, if some rain-water caught (as far as could be ascertained some time in November) be excepted. This water was used for about a week after being caught, but its use was discontinued when from its appearance and an oily or tarry surface it was suspected that it might not be wholesome. The officers drank this water, but for those in the cabin it was filtered. The men represent this water as having dripped from the masts and rigging and recently-painted deck-houses, and as having been very bad. This is somewhat doubtful.

From all that has been learned it is believed that the men were supplied with a certain amount of lime-juice and antiscorbutic food, but that the first was not given as soon as it ought to have been, and the latter not in sufficient quantity to prevent or cure sickness in the case of men who, in consequence of other complications, or from a predisposition to scurvy when they commenced the voyage, were injuriously affected by salt provisions.

The following are entries taken from the master's log: —

William B., October 25th, stricture. Returned to duty November 24th.

William C., December 6th, feet and legs swelling, appearing to have dropsy. Died on January 31st.

Mauritz C., January 18th, feet and legs swelling.

John R., January 25th, scurvy.

Olinto C., January 28th, pains in legs, and feet swelling.

James B., January 29th, legs swelling.

William B., January 29th, stoppage of water, and severe pains in legs and body.

The cases after entering the hospital were as follows: —

William B., aged thirty-seven, entered February 9th. Three months ago, after a slight cold, began to swell all over body. Severe pain in left chest. He had dyspnœa for the last five weeks. No headache or vertigo, but occasionally vomiting and twitching of his face. He had had severe pain on passing water, and was obliged to have it drawn by catheter. On entry, his abdomen was tense and hard, and he said that he had passed no water for two days. The penis was swollen, and the catheter obstructed about the membranous portion of the urethra. These local troubles, according to his own statement and the ship's log, antedate the present illness. He was markedly dropsical on entrance, but the swelling rapidly disappeared in a few days. He was said to have much dyspnœa on entrance, but this improved so rapidly that there was little to be seen of it when the visit was made the next morning. There were no ecchymoses, nor sponginess of the gums, although he alluded to some trivial hæmorrhage. The urine of the 10th was of specific gravity 1017, with a slight trace of albumen, pus, and some bladder epithelium. Nothing abnormal was detected in the thorax by auscultation. He had a hot-air bath. On the 20th the urine was of specific gravity 1020, with a slight trace of albumen, pus, blood, uric acid, large epithelium, and hyaline and granular casts. For a few days he had a mottled eruption, composed of rounded spots about one eighth of an inch in diameter, partially confluent, and preceded by pustules, said to have come on six weeks before. He was discharged on the 23d, well.

Olinto C., aged thirty-five, entered February 9th. Does not drink. Has had gonorrhœa and chancroids. Three months ago noticed general weakness, with some stiffness in knees and ankles. Seven weeks ago legs and ankles began to swell, and there was dyspnœa on exertion, but he did not give up work until eleven days ago. He noticed some palpitation a week ago, and cough four days ago. His throat had been sore for four months. On entering, he complains of dull pain in his chest, and also on the right side of the body. There is some œdema of feet and ankles and legs. The gums were slightly anæmic, but there was no marked sponginess. There were no hæmorrhagic spots or indications thereof. The cardiac area was increased, the apex beat felt just to the outside of the nipple. There was a slight roughening of the first sound at the apex, and a marked thrill. The patient gradually improved, but on March 1st it was noticed that he had no patella reflex, and he complained of stiffness and pain in the legs, and had some difficulty in using them. The muscles were well developed and hard, perhaps somewhat abnormally so, and reacted only feebly to a strong faradic current. The muscles above the thigh reacted well. On March 22d he was discharged, much relieved.

Moritz C., aged twenty-eight, born in Finland. Entered February 14th. Was always well until six weeks ago, when crossing the line; then felt chilly, and could not keep warm. His legs began to swell, and the swelling extended to his body and face. There was slight headache, but no vertigo. The appetite was fair and the bowels regular. There had been dyspnœa for four weeks, gradually increasing, and for several nights past it had been so severe as to prevent his sleeping. Some cough for three or four days. Temperature 101° F. Pulse 120. When first visited he was seen to be a short, powerfully-built man, of fair complexion, in a state of urgent dyspnœa, the countenance being somewhat dusky, and wet with perspiration, which was said to have come on rather recently, and, it was hoped, was a sign of approaching relief. The anasarca was general, but not extreme at any one point. There were no distinct hæmorrhages, but some purplish spots on his wrists and hands, and a few on the body. The teeth and gums showed nothing abnormal, except a barely perceptible swelling, which had not bled. Both chests were full of moist râles. There was nothing abnormal about the cardiac sounds. The urine was normal in color, of specific gravity 1027, containing one fourth of one per cent. of albumen, with a sediment of amorphous urates, and an occasional blood, pus, or epithelial cell. The dyspnœa became more and more urgent, the râles more abundant, the expectoration frothy and bloody, the cyanosis increased, and he died in the morning, two days after admission.

The treatment consisted in diffusible stimulants, ammonia, and alcohol. The orthopnœa would have made a hot-air bath difficult to administer, and the presence of abundant perspiration made it appear improbable that any further action on the skin would be of value.

The anæmic appearance of the patient, combined with the fact of the rapid relief and recovery of his comrade (Burns), whose condition had been similar, though less urgent, deterred me from venesection, which, I think, as the autopsy showed, would not have

been efficacious. Nevertheless I think should such a case come again under my care I should bleed him.

The autopsy, made by Dr. Gannett, showed general anasarca, hypertrophy and dilatation of the heart, with relative insufficiency of the tricuspid valve. The heart muscle contained much finely granular, albuminous material, and considerable fat in the form of small drops. There was chronic adhesive pleurisy, with hydrothorax and œdema of the lungs, acute bronchitis, and acute bronchial pneumonia. The spleen was that of chronic passive congestion. The kidneys showed cloudy swelling, with interstitial nephritis. The epithelium of the convoluted tubes contained much finely granular albuminous matter, and a few small fat drops. The interstitial tissue was increased in thickness, showing in places a hyaline appearance, and in others a slight degree of round-cell infiltration.

Incisions made through some of the purple spots mentioned above disclosed no ecchymoses, and nothing like extravasations, new or old, were found, either in the internal organs, the soft tissues of the legs, or under the periosteum of the tibia.

The two men who did not go to the hospital are supposed to have shipped again, as they have not been heard of at the consul's office. William B. is also supposed to have shipped, and Olinto C., who was discharged relieved, was given a passage home.

It seems quite evident that there was little doubt in the minds of those who first saw these cases that they were scurvy, a disease usually susceptible, from its striking symptoms and the peculiar circumstances under which it arises, of easy diagnosis. The point, however, which will most strike the attention in accepting this diagnosis is the absence of the most usual and well-marked symptoms, namely, the hæmorrhages under the skin and from the mucous membranes, and also the spongy gums. In one case only which entered the hospital was there a barely perceptible swelling of the gums, and in only one or two the most trivial hæmorrhage. The men in the hospital gave no history, although questioned, of having had themselves sore mouths or hæmorrhages, or of having known of these conditions in their comrades who did not enter. The pain and swelling were, or had been, the chief symptoms in all that we saw, and in two that we did not see. Only one of the six men was called a case of scurvy on the log.

Army surgeons speak of cases in which the most characteristic symptoms are wanting while yet the cachexia exists, so that "general debility" on a report may mean scurvy. We can hardly, however, call our cases, which had been going on for many weeks, as Flint says such cases may be regarded as "incipient," though they may be "not fully developed."

No author whom I have consulted makes any statement of the conditions under which we may expect such departures from the ordinary type of scurvy, one set of symptoms being almost entirely absent while others are present in their full severity, sufficient to cause death in two cases out of six. We can hardly, in presence of a group of six cases, involving at least three nationalities (English, Italian, Finnish), speak of "individual" peculiarities, and these cases, therefore, lend an additional support to the doctrine that in the ætiology of ordinary scurvy there are involved several factors, of which the deprivation of fresh vegetables is only one, though perhaps the most important.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

SPECIAL MEETING.

ALBERT N. BLODGETT, M. D., SECRETARY.

APRIL 30, 1884. Meeting called to order at eight o'clock by DR. R. T. EDES, chairman.

The first paper was by DR. HENRY J. BARNES, upon

SEWAGE SYSTEMS AND THE EPURATION OF SEWAGE BY IRRIGATION AND AGRICULTURE.

The paper was received with applause by an audience composed of physicians and a large number of sanitarians and sanitary engineers, as well as a number of delegates from the Sanitary Boards of towns about Boston, the superintendent and physician of the Woman's Prison at Sherborn, representatives from Natick and various other places.

DR. GEORGE B. SHATTUCK, in opening the discussion of the subject, said that he only consented to do so in the hope that others better acquainted with it, and who had personally inspected the sewage farms at Gennevilliers, at Berlin, Dantzic, and in England, might be induced to give their views. As the Society was fortunate enough to enjoy the presence of past and present members of the State and City Boards of Health, as well as of several able and distinguished engineers, he felt sure justice would be done the subject, than which none more important awaits regulation in the older Eastern States, and he would confine himself to a brief statement of the general methods of the disposal of sewage as at present understood and practiced. These may be included under three heads: (1) immediate discharge into some neighboring body of water, stream, lake, or ocean; (2) chemical precipitation of solid constituents; (3) discharge upon land to be disposed of by downward filtration through the soil or by broad irrigation for purposes of agriculture and fertilization.

The method of chemical precipitation might, as Dr. Barnes's interesting paper plainly showed, be left out of consideration as unsolved. Of the other two methods the first was comparatively simple, satisfactory, and inexpensive, where there was in the immediate neighborhood a large body of deep water moved by tides or currents sufficiently active to carry off or oxygenize the sewage without its becoming a nuisance to other places in the process. Boston, the speaker thought, was so situated.

In discussing the disposal of sewage by the aid of the soil Dr. Shattuck said the systems of downward filtration for epuration, or of broad irrigation for agricultural purposes, ought to be carefully distinguished from each other, it being possible, as a rule, to use a larger and less variable amount of fluid in the former than in the latter method. The successful application of either of these systems must be governed by many variable factors, so that no general laws had been or probably would be arrived at. Each place must work out its own problem and its own sewage salvation. In discussing sewage-farming one must bear in mind the character of the soil, whether sand, clay, or loam; the character of the climate, whether moist or dry, hot or

cold, or variable; the kind of crop for which there is a market, whether coarse grass or garden vegetables; and last, but not least, the composition of the sewage itself, the proportion of solid constituents to liquid as determined by rainfall or by *per capita* amount of water used or quantity of solids admitted to the sewers.

It should not be forgotten that the present sewage irrigation at Gennevilliers was voluntary with the farmers, who used it or not as they chose, and the calculation of 2000 hectares (about 5000 acres) with which to handle the whole of the 110,000,000 cubic metres of annual sewage of the city of Paris, the speaker thought, must be based rather upon the system of downward filtration than upon that of broad irrigation for agriculture.[1] Dr. Shattuck was not aware of any application of sewage-farming upon a large scale which had proved actually profitable. It would generally, he thought, prove a question of comparative cost.

MR. E. W. BOWDITCH, sanitary engineer, stated that the assertion which was contained in the paper that the water supply of Chicago is contaminated with sewage from the city is not probably correct. A year ago there was no positive proof of the truth of this statement, although the time will come when this will be true unless the crib for the supply is carried farther out into the lake. In regard to the frequency of the cleansing of the cess-pools so frequently attached to dwellings in cities, an incident occurred a few days ago which illustrated the average degree of sanitary knowledge possessed by the average citizen. A gentleman in speaking of cess-pools stated that one great objection to their use consisted in the necessity for their periodical emptying and cleansing. During further conversation the fact was disclosed that the cess-pool on the premises occupied by the gentleman had not been emptied in eight years.

The accessible reports on the disposal of sewage by the aid of irrigation and agriculture do not agree, thus making it very difficult to arrive at any definite opinion upon the merits of any special plan. Probably, too, each particular locality and each individual system presents different conditions, and has its own particular drawbacks.

At Pullman, Ill., which has been considered the model of disposal of sewage by and of agriculture, it is said that this plan has been abandoned, and that the sewage is now poured into Lake Michigan.

As far as Massachusetts is concerned there can be but little question that the rigorous climate of our winters would seriously interfere with the filtration of sewage in the colder months, and there is lack of enthusiasm among the farmers to test the efficacy of the plan.

The sewage of the Mystic Valley corresponds exactly to what it is supposed to be. It is possible and quite probable that a series of filters would be useful in clarifying the foul water of this sewer, though it would not purify it. Some time ago a barrel of Mystic sewage was sent to New York to be used as a test for a process for purifying foul water. Upon return of the purified product it was found to be free from any offensive quality. At the same time a sample of water which receives the drainage of sixty tanneries was also forwarded, and this, although originally very much polluted, was returned free from any offense, and has remained sweet and clean for a period of many months.

The general question of sewerage is daily assuming a more prominent position among the economical topics of our towns and cities. Of 346 towns in the Commonwealth eighty-four have already introduced works for public water service. Of these eighty-four towns twenty-six have also sewerage systems, while the other fifty-eight have water brought to them, but no means of its removal. These towns will be obliged to adopt some means of purifying or disposing of sewage in order to obviate nuisance which must otherwise inevitably arise. It is not easy to see how towns more than ten miles from Boston could possibly unite on or derive benefit from a metropolitan sewer. The cost would be too high, and the towns could not possibly afford it. From experiments which have been made with the object of forming an opinion on this subject, and which have been quite extensive, it would seem that the most practical solution of the sewage problem might be found in some process of purification.

DR. H. P. WALCOTT, of the Massachusetts State Board of Health, in response to a call from the chair, spoke as follows: The statements of previous speakers render any general discussion of the subject of irrigation unnecessary, and I shall, therefore, confine myself to the sewage farms of Berlin, having had very favorable opportunities for studying them. To me they represent the best experiment thus far made in sewage disposal by way of irrigation, far more complete than anything of the sort in England or France.

Two farms, Falkenberg on the northeast, and Osdorf at the south, are the localities at present made use of. The acreage has been steadily increasing, and now (1884) appears to be between nine and ten thousand acres, of course not all prepared, perhaps not tweny per cent.; Falkenberg so incomplete as to be in an unsatisfactory condition; Osdorf, in the finished parts, eminently satisfactory; no smells except localized ones about outlets of sewer; soil under-drained; effluent from subsoil drains, clear, free from smell or taste, as good as the average drinking water of Berlin. In the earlier days of the farm the principal crops, rye grass and cabbage, were readily sold at remunerative prices; the markets are, however, now overstocked in these articles, even though large quantities have been sold in markets comparatively distant from Berlin.

The sewage question in Berlin has, however, never depended upon financial considerations; irrigation (from the height of water level in the soil and very slight fall in many miles below Berlin of the river Spree) was a necessity, something to be had at any cost. Enormous as this cost has been the money is shown to have been well spent by the improved sanitary condition of the city, therefore any money return is so much gained. There is one arrangement at the Berlin fields open to serious criticism, the so-called winter basins, into which sewage is run during seasons of the year when crops are not in growth. These are many acres in extent, act simply as filters, receive sewage in very large quantities, which occasions an offensive deposit, to be plowed into the soil in the spring, the ground then planted with grain, and receives no more sewage except in case of drought. These basins are for a time quite offensive, and would not, I think, be tolerated in this country. Gennevilliers lacks one of the great elements of success at Berlin, the strict control by competent authority. At Gennevilliers the farmer

[1] At least it allowed about fifteen times as much sewage to the acre as was thought desirable for agricultural purposes by the commission appointed to consider the best disposition of the sewage of the city of Worcester.

takes the sewage or not as seems best to him. Upon one visit to Gennevilliers no sewage at all was being disposed of by irrigation; all was going to the river; this was naturally during damp, overcast weather.

No experiments of any value have been made in this country. Colonel Waring's system at Sherborn was very expensive in first outlay; does not furnish a satisfactory effluent. Broad irrigation at Insane Hospital at Worcester is a complete success, but under conditions which it would not be possible to imitate in many towns. It is to be hoped that the preparations for a system of irrigation for sewage of prison at Concord may be carried out, and give an opportunity for careful determination of questions as to evaporation, etc., which have never been studied in this country so far as irrigation fields are concerned.

Dr. C. F. Folsom said that there is no longer any doubt of the facts that sewage can be purified by irrigation, that the crops raised are suitable for food, and that sewage farms can be managed without creating a nuisance. This is all very expensive, however, and in no case has a sewage farm been carried on for any length of time, except on the scale of a few acres, in such a way as to satisfy the sanitary requirements of the case without the incurring of very considerable pecuniary loss. In Paris, Dantzic, and Berlin the loss is very considerable, but these cities are so situated that they must have sewage irrigation if they have sewerage, and the outlay on the sewers is reckoned with the deficit from the sewage farms as the cost of cleaning the cities and improving the public health. The great rise in the value of the land where sewage is used in irrigation near Paris is due to the fact that it is near an immense and rapidly growing city, and applies to land where sewage is not used as well as to the irrigated land. The soil, too, is of such a character that the farmers use wind-mills and ordinary irrigation for garden crops, and in some cases prefer it as being less offensive than the sewage.

There is no land in Eastern Massachusetts quite suited for sewage irrigation on a large scale, but near Worcester and Natick there is land which can be made available for that purpose just as soon as the authorities decide that the nuisance of the present methods of sewage disposal is great enough to justify the trouble and expense. If the sewage of Boston were used in irrigation there would be an annual loss to the city from that source alone of a sum somewhere between twenty thousand and fifty thousand dollars. The pecuniary value of the sewage of Boston can be estimated roughly by remembering that its strength is represented by the daily excrement of one person in three barrels of water, forming a fertilizer which no one would think worth much for daily use in his garden.

Alexis H. French, Esq., engineer for the town of Brookline, said: "In the present state of chemical and agricultural science an engineer would not be justified in departing very far from the practice that has heretofore been followed in the disposal of the sewage of the favorably situated cities and towns, in the simplest way possible, provided that this method did not menace the public health. Pending the discussion and experiments on the subject which, it is to be hoped, will be continued until some satisfactory solution will be obtained, the engineer has to face the question in the light of the existing information, and do the best for his clients that the circumstances will allow.

"In relation to the present systems of sewers it may be said in their favor that while it is more than probable that eventually some method of sewage disposal will be discovered which shall be unobjectionable in a sanitary point of view, if not in an economical one, these same systems will continue to collect the sewage, and will not, therefore, prove to be the vast financial loss which might seem to be the case from such a change in plan.

"One of the greatest obstacles to sewage irrigation in New England is the peculiar topography, this method of disposal, as I understand it, requiring comparatively level land, which, to take the drainage of our larger cities, must be several square miles in extent. It would, perhaps, be applicable to the smaller cities and towns, where the 'separate system of sewerage,' as it is called, is in use, and to those western cities which have near at hand large areas of prairie land favorably situated, both for receiving the sewage and for the subsoil drainage which this system necessitates."

Dr. John G. Blake said that when we succeed in obtaining a law which shall compel towns to take proper care of their sewer products, we shall have made a great advance in the solution of the question of irrigation and agriculture. There are certain weighty objections to be first overcome. It is well known that the population of Eastern Massachusetts is to a very large extent composed of the classes of artisans and mechanics, or manufacturers, and that agriculture as a commercial or economical pursuit is not cultivated to any considerable extent. This interposes a certain amount of indifference, and even opposition, to the introduction of irrigation and agriculture as hygienic measures.

There is reason to hope that within a short time the town of Natick, which is at present the gravest offender in the pollution of the Boston water supply, will be forced to purify its sewage products, and to render its waste water harmless before it is poured into the reservoir from which the citizens of Boston are now drinking.

In relation to the sewage problem in the Mystic Valley the condition of things there is not yet quite satisfactory. The water as it is now discharged is far from pure. The owner of a new filter, however, agrees to supply a series of filters which shall remove all suspended matter in the water, and we propose to dispose of the rest by irrigation. The city owns five acres of land which can be utilized for that purpose, and it is probable that the experiment will be tried, and, if found successful, it may be extended. Dr. Blake then moved that a special meeting be provided for the further consideration of the present subject, which was carried, and the Secretary was directed to arrange for such a meeting in the near future.

Adjourned at 10.15 P. M.

CONNECTICUT MEDICAL SOCIETY. NINETY-THIRD ANNUAL MEETING.

This Society, one of the oldest in the country, as only two or possibly three were organized before it, held a very successful and interesting Convention at New Haven May 28th and 29th.

NO CHANGE IN PLACES OF MEETING.

In accordance with an old custom arising from the two capitals which the State formerly had, the Society

meets alternately at Hartford and New Haven. A strong effort was made this year to break over this custom, now settled by a by-law of the Society, and meet every third year at Bridgeport. An effort was also made by a large number to have but one place hereafter, as the State has now but one capital. There would be many advantages in having but one place, which would be the headquarters of the Society; but the change was not made in either direction, the Society by a very decisive vote maintained the validity of the old custom.

The active growth of the Fairfield County Medical Society and their increased interest, as well as the known hospitality of Bridgeport, were urgently pleaded, but were not strong enough to induce the change. The chief cause, however, why this experiment was not at least tried was the precedent offered to other cities in the State to ask the same favor.

THE FELLOWS OF THE STATE SOCIETY.

The Fellows, so-called, made up of the officers of the Society and delegates elected from each of the eight county societies which make up the State Society, meet Wednesday for business. No others vote, although the members can attend, and if they have ever been elected to act as Fellows have all the privileges except voting. Most of the counties send four Fellows; one sends three. There has been a strong desire to increase the number for some time, and base the number sent upon the membership of the county societies, which varies greatly, three having a hundred or more each, the others not over fifty on an average; but the Charter fixes the number. Under the idea that by legislation in revising the Charter of the Medical Department of Yale the Charter of the Society had been undesignedly repealed, an amendment to the By-laws was offered basing representation upon membership, and making all ex-presidents permanent Fellows, but these were this year referred to a Committee on the Revision of the Charter.

PRESIDENT'S ADDRESS.

The Fellows met in convention, Wednesday, May 28th, at three o'clock. All parts of the State were well represented.

The President, DR. E. B. FRYE, after appointing a committee on credentials, welcomed the Fellows, as in duty bound, and called their attention to the subjects to which he thought special attention should be paid, the legal *status* of the Society, whether or no its Charter had been repealed by the Act of 1879, suggesting a new act to put the question beyond doubt. The proposed amendments to the By-laws met, for the most part, his approval. He spoke of the great progress of late in sanitary science, and of the duties of the profession as guides of the people. He unqualifiedly indorsed the Code; both his conscience and judgment caused him to indorse a code of ethics, but it should be intelligently construed; the claims of humanity are to be respected. He advocated a higher standard in medical education, and the maintenance of a high standard in the affairs of the Society. He alluded very appropriately to the death of distinguished honorary members of the Society, Drs. J. Marion Sims and Willard Parker, and to the members, including one recently president, Dr. Pliny Jewett, of New Haven.

COMMITTEES.

After the report of the Committee on Credentials, which included a list of those qualified to vote, the usual committees were appointed. On Unfinished Business, Drs. C. J. FOX, F. E. Beckwith, J. F. Calef. On County Resolves, M. Storrs, L. B. Almy, F. N. Braman. On Business, T. B. St. John, H. G. Howe, R. S. Goodwin. On Honorary Members, W. H. Mather, J. La Pierre, G. Clay. Auditing Committee, J. W. C. Foster, J. Olmstead. To Nominate Essayists, W. C. Wile, F. S. Crossfield.

RELATIONS WITH YALE COLLEGE.

PROF. C. A. LINDSLEY then announced that a committee had been appointed by the Corporation of Yale College to confer with the Society in regard to the severance of the relations between the College and the Society. It was voted that a committee of three be appointed for that purpose, and the President selected Drs. F. I. Dickinson, M. C. White, and Orlando Brown.

This committee afterwards reported that it was mutually desired by both parties to cancel and annul the relations heretofore existing between them, and that the officers of the Society be authorized to execute all papers requisite to obtain this end, it being understood that such separation shall be without prejudice to all vested interest, contract, or endowment of the College, and that any prerogative heretofore possessed by the Connecticut Medical Society shall revert to the same. The report was accepted without debate, and by this act the relationship between the Medical School and the Society virtually severed. Before the existence of the College, medical degrees and licenses to practice were granted by the State Society, and for many years no one could legally practice medicine in Connecticut unless he were a member of the State Society. The rise of Thompsonianism led to a bitter struggle, and to the repeal in this State of all restrictions upon the practice of medicine by law, and no law regulating medical practice, except one excluding itinerant quacks or medical tramps, has ever since been passed.

The Medical Society and the Medical Department of Yale College were chartered conjointly, and degrees conferred by a board of examiners appointed by the Society and its President, together with the professors of the Medical School. The Society also, by a committee, nominated the professors when any vacancy occurred. By this action, when completed, the entire control of the School will pass into the hands of the Corporation of Yale College, and no farther jurisdiction be exercised by the Medical Society. As the action cannot, in the opinion of the Corporation, be completed without farther legislation, the usual committees were this year appointed.

After the passage of the resolution Mr. Kingsbury, of Waterbury, a member of the committee on the part of the Corporation, was invited to speak about the measure just passed.

He said that the enlarged plan of medical instruction involved so much additional expense as to be burdensome to the Corporation. The increase in the facilities and means of instruction had not been followed by an increase in the number of students. The union between the Society and School had ceased to be useful, and its cessation was desired by both. An

endowment of the School was needed. He commended the School to the profession, and stated that its standard had never been better, nor its means for instruction. He commended the School to all students of medicine, and invited a close scrutiny of the institution and its methods by the assembled physicians, assured if they did make it they would advise all young men of their acquaintance who were students of medicine to attend.

The movement to separate was expected, and had been fully considered before the meeting of the Society. It is expected that there will be a closer union with the College; that in collateral branches better facilities will be afforded medical students. A determined effort to secure a proper endowment ought to succeed. There are enough in the State that could afford to do this, as President Porter said, in his after-dinner speech, in allusion to the small amounts that have been given to endow medical schools in comparison to the endowment of other departments.

THE LEGAL STATUS OF THE SOCIETY.

PROFESSOR CARMALT, as Secretary of the Committee on the Legal Status of the Society, reported that but one meeting had been held. An eminent legal firm, in Hartford, were employed to draw up a brief of the case, which was then submitted to Mr. Simeon E. Baldwin, of New Haven, for opinion. He stated that, in his judgment, the Act of 1879, revising the Charter of the Medical Department of Yale College, did not in any way affect the corporate existence of the Connecticut Medical Society. In this opinion the other lawyers referred to agreed. The report was accepted.

NOMINATING COMMITTEE.

A recess was then taken in order that the Fellows from each county should select a member to act on the Nominating Committee, which was reported as follows: M. Storrs, W. R. Bartlett, L. B. Almy, Seth Hill, C. J. Fox, L. J. Ketchum, F. D. Edgerton, C. F. Sumner.

UNFINISHED BUSINESS AND AMENDMENTS.

The first report called for was on Unfinished Business. The committee reported favorably on all except those amendments relating to an increase in the number of Fellows, which were unconstitutional. After some debate they were referred to a Committee on Revision of the Charter, to be appointed hereafter. On motion of DR. CHAMBERLAIN they were considered separately. The first one, as verbally amended and passed, was to the effect that all remarks in the scientific discussion of any paper may be committed to writing by the person making them. The second that each County Society designate at the time of election the one that is to act as a member of the Nominating Committee, and also appoint a substitute. It was also voted that the Secretary be a permanent officer, and that he shall receive a salary of fifty dollars annually, commencing with 1884. A salary of twenty-five dollars was also voted to the Treasurer. Heretofore the Secretary has received no compensation, and the Treasurer only a nominal sum, designed to meet certain expenses. The treasury is now in such a condition that some provision can be made where it is justly due.

The proposed amendment that no voluntary paper shall be read that has not been read before the State Society, or indorsed by some County Society, elicited considerable debate, and was finally tabled.

COMMITTEE ON REVISION OF THE CHARTER.

It was then voted that a committee composed of one from each County Society should be appointed by the President to consider the revision of the Charter, to report to a special session of the Society to be called by its chairman before the close of the next Legislature. This committee should also coöperate with the Corporation in securing farther legislation, should any be needed, to sever the relations now existing between the Society and the medical institution of Yale College. The President appointed on this committee Drs. C. W. Chamberlain, M. C. White, F. N. Braman, G. L. Porter, C. J. Fox, F. D. Edgerton, R. S. Goodwin, F. L. Dickinson.

THE RETIRING SECRETARY.

DR. WILE then presented the report of the committee appointed last year to draft resolutions of thanks to the retiring Secretary, who had filled the office for eight years. The report was accepted.

PUBLICATION OF TRANSACTIONS.

It was voted, on motion of PROF. M. C. WHITE, that the Secretary proceed to publish the Transactions of the Society previous to 1830, together with such papers read before it as can be obtained. That one thousand copies be printed, and a copy sent to each member of the Society.

The Secretary stated the estimated expense to be about three hundred dollars, and about two hundred and fifty dollars had been raised for this special purpose. Hartford and New Haven counties had each raised one hundred dollars; other counties had promised their proper share. In Hartford Dr. G. W. Russel had given fifty of the hundred raised.

HONORARY MEMBERS.

The Committee on Honorary Members proposed the following names to be acted upon next year: Dr. William F. Hutchinson, of Providence, R. I., and Dr. Morris H. Henry, of New York. They also presented the following names for action this year: Dr. James E. Reeves, of Wheeling, West Virginia, Secretary of the State Board of Health of that State, and Prof. T. A. Emmet, of New York, who were elected honorary members.

EXPULSION OF DR. E. L. R. THOMPSON.

The Committee on Resolutions from county societies reported that the steps taken by the New Haven County Medical Society in the expulsion of Dr. E. L. R. Thompson, charged with procuring an abortion, were in accordance with the rules of the Society, and recommended that their action be sustained, which was voted unanimously.

TREASURER'S REPORT.

The report of the Treasurer, DR. E. P. SWASEY, was then read, showing the expenses larger than usual, due to the unusual item of legal advice. The receipts were also larger, leaving the treasury in good condition. This, he stated, was due to the increasing membership to some extent, and the larger proportion of paying members, but principally to the zeal and earnestness of the county clerks, who are the collectors of the taxes. He urged that those in office should be retained as long as they will consent to serve, and upon

the clerks to retain their places, although laborious, as changes caused confusion and much extra labor. Of the tax of 1883 less than fifty dollars remains due. The report was referred to the auditors, and upon their report as correct, received and ordered on file.

As the reports of the Standing Committees on Examination and Nomination of Professors were not in readiness, they were ordered to be made to the Secretary as early as possible.

AMENDMENT TO BY-LAWS.

On motion of DR. CHAMBERLAIN the expediency of increasing the number of standing committees by appointing one on hygiene, one on surgery, etc., was referred as an amendment to the By-laws to the next convention.

ELECTION OF OFFICERS.

The Nominating Committee reported the following officers, who were duly elected: President, B. N. Comings, of New Britain; Vice-President, E. C. Kinney, of Norwich; Treasurer, E. P. Swasey; Secretary, S. B. St. John; Committee on Matters of Professional Interest, N. E. Worden, J. H. Grannis, E. A. Hill; Committee on Examination, F. D. Edgerton, H. W. Buell, Lewis Barnes; Committee to Nominate Professors at Yale Medical School, C. W. Chamberlain, G. L. Porter; Committee on Publication, I. W. Lyon; Committee of Arrangements, M. Storrs, W. M. Hudson, James Campbell; Dissertator, W. H. Holmes.

After the usual routine business the Convention adjourned to meet at the call of the chairman of the Committee on Revision of the Charter.

THURSDAY'S SESSION.

The Convention met promptly at nine A. M., with the President, Dr. Nye, in the chair, and Dr. St. John at the Secretary's desk.

HISTORY OF THE YEAR.

The first business in order was the SECRETARY'S report. He stated that the usual harmony and prosperity had marked the history of the year. The losses by death have been unusually small in number; but four. There has been one expulsion, and five have left the State. Forty-three new members have joined through the various counties, so that the Society now numbers 480. He gave an account of his work before the Legislative Committee with reference to the measure relating to the sale of patent medicines, and also of the memorial relating to the National Medical Library and Army Medical Museum, which had been sent to the members of the Senate and House. He had not commenced the publication of the early Transactions previous to 1830, as before this session all the county societies had not been heard from, all that had expressed a willingness to pay their share. One hundred dollars had been received from Hartford County, fifty dollars the gift of Dr. G. W. Russell. A like amount had been contributed by New Haven County. The expense would be about three hundred dollars, which would be fully met by a contribution of fifty cents from each member who had not already paid. That was the assessment in the counties thus far reported.

ADDRESS BY THE PRESIDENT.

The President's address, on The Claims of the Medical Profession to the Respect and Gratitude of the Community, is well described by its title. The sacrifices made by physicians for the public good, and their self-denying labors in investigating the causes and prevention of disease, their great work in securing proper treatment for the insane and the like, in advancing education and promoting reform, were clearly set forth, while the rewards from the public and the place given the physician in the conduct of affairs are far from commensurate with his work and its results.

The President-elect, DR. B. N. COMINGS, then took the chair. Reports of various committees were presented and properly referred. The delegates from other States were then presented, and made brief speeches: Dr. English, of New Jersey; Drs. Burdette and Richardson, of Massachusetts; Drs. Schwartz and Smith, of Rhode Island; Dr. Hammond, of New Hampshire, and Dr. Huntington, of Vermont.

MEDICINE FIFTY YEARS AGO.

A very interesting paper, full of personal reminiscences, was read by DR. MATHEWSON on Medicine Fifty Years Ago. The advent of the various instruments of precision were detailed in turn, and one account of the opposition they aroused, especially the whole department of gynæcology and its armamentarium. He described graphically the opposition to Tully because he denounced the lancet, and the distrust of the profession. Tributes were also paid to Nathan Smith and Benjamin Silliman. Yale then had the largest class of any medical school in New England, although Harvard graduated a few more.

THE TREATMENT OF STRANGULATED HERNIA

was very well treated by DR. HARRIS, and the results of seventy-five cases of all grades of conjunctivitis treated either by cleanliness alone or by the use of antiseptics, mainly boracic acid, given by Dr. Wilson.

PRESENTATION OF CASES.

The presentation and relation of interesting cases was then called for.

PROFESSOR CARMALT related a successful case of litholapaxy in a man forty-two years old. Ninety-seven grains of calculous matter were removed; the patient went home in four days, having had no fever. An attempt at wiring the patella for ununited simple fracture rebroken, or rather torn apart by accident, resulted unsuccessfully, the wire cut through the upper fragment in trying to pull it down. Necrosis followed, free drainage was established, and suppuration did not extend into the joint. He did not think well of the operation, and had collected statistics of thirty cases, failure resulting in fifty per cent.; death from pyæmia had been caused. He also exhibited two patients, one of extirpation of the tongue for cancer; the lingual arteries were first tied, so the operation was bloodless; tracheotomy had also been performed. The patient could talk well.

The second was subfenestral section of the femur to obviate ten inches shortening, from former hip-joint disease, but two inches were left, and with a shoe she could walk quite well.

A very lifelike drawing of a syphilitic eruption and ulcerating condylomata, drawn and colored by Dr. Leighton, was presented by Professor Beckwith, who related the history of the case; oleate of mercury locally, and mercury internally, effected a cure; he preferred mercury to the iodide of potash.

DISSERTATIONS, PAPERS, AND SPEECHES.

PROFESSOR BECKWITH urged the claims of the Sims Memorial upon the Society, and reported what had been done in several cities of the State.

The dissertation upon the Germ Theory of disease was then read by Dr. Worden. An able presentation of all known upon the subject up to the latest utterances. It was exhaustive and thorough, and claimed the close attention of all until its close.

The early recognition of Potts' disease was urged by Dr. Packard, and the mischief caused by delay, often irremediable, clearly portrayed. He advocated fixation by a plaster-of-Paris support.

DR. BEARDSLEY gave a more detailed account of his method of treating all forms of malaria without quinine. His remedies were an aloetic or mercurial purgative, or preferably a combination of the two with capsicum, until bilious stools were produced; arsenic with serpentaria, anise, caraway, fennel, and a bitter tonic, gentian, or his favorite boneset tea *ad libitum;* salicin and rhubarb he also used, claiming good results where large doses of quinine had failed.

After miscellaneous business and reading other papers by title, the Society adjourned for dinner, where Mayor Lewis, President Porter, of Yale, Clarence Deming, Professor Bunce, Dr. Delevan, of New York, Dr. English, of New Jersey, and others, made pleasant and entertaining after-dinner speeches.

AMERICAN NEUROLOGICAL ASSOCIATION.

TENTH ANNUAL MEETING. HELD IN NEW YORK JUNE 18, 19, AND 20, 1884.

FIRST DAY. AFTERNOON SESSION.

ANNUAL ADDRESSES.

THE Vice-President, DR. WILLIAM J. MORTON, of New York, occupied the chair, and having read a letter of regret from the President, Dr. Robert T. Edes, of Boston, who was unable to be present, made an address in his place, which was devoted to a retrospect of the work of the Society, and to a defense of specialism, particularly in the department of neurology. At the conclusion of it he introduced the President-elect, DR. ISAAC OTT, of Easton, Penn., who delivered the President's address, the subject of which was The Paths of the Various Fibres in the Spinal Cord. After reports had been made by the Council and by the Secretary and Treasurer, Dr. R. W. Amidon, the annual

ELECTION OF OFFICERS

took place, and resulted as follows: President, Dr. Burt G. Wilder, of Ithaca, N. Y.; Vice-President, Dr. Leonard Weber, of New York; Secretary and Treasurer, Dr. Graeme M. Hammond, of New York; Councilors, Drs. W. R. Birdsall and William J. Morton, of New York.

RARE SPECIMENS.

PROFESSOR WILDER then exhibited the following:—

Preparations illustrating (*a*) the existence and circumscription of the portæ (foramen Monroi) in the adult human brain; (*b*) the presence of the crista fornicis in fœtal and new-born human brains; (*c*) the covering of the cerebellum by the cerebrum in a young chimpanzee whose brain was hardened within the skull.

He also stated that he had collected two additional instances of absence of the callosum in the domestic cat, the specimens of which he had, unfortunately, neglected to bring with him.

DR. AMIDON then exhibited a human brain in which the corpus callosum was absent.

FIRST DAY. EVENING SESSION.

ELECTION OF NEW MEMBERS.

The following new members were elected: Dr. Sarah J. McNutt, of New York; Dr. G. Belton Massey, of Philadelphia; and Dr. George W. Jacoby, of New York.

THE REPORT ON THE HAMMOND PRIZE ESSAY

on the Functions of the Optic Thalamus in Man was read by the SECRETARY, and in it it was stated that but one essay had been received, and that although it was possessed of remarkable merit, in general the committee had decided not to award the prize to it, for the reason that the portion of it relating to the special functions of the optic thalamus in the human subject was scanty and inconclusive.

The first paper of the evening was read by DR. BURT G. WILDER, of Ithaca, on

MACROSCOPIC ENCEPHALIC NOMENCLATURE,

in which he advocated the introduction of a new system which substituted simpler names for many of the terms now in use; claiming that the monomial technical nomenclature which he proposed possessed the following advantages: (1) brevity; (2) flexibility; (3) adaptability; and (4) capacity for uniform abbreviation.

DR. A. D. ROCKWELL read a paper entitled

A CASE OF TONIC SPASM OF THE DIAPHRAGM (?).

The patient was a lady thirty-five years of age, who had been the subject of severe paroxysms of distress for twelve years. In these she was awakened out of a sound sleep by a feeling of oppression about the lower end of the sternum and over the epigastrium, and extending also to a corresponding point in the back. She described it as resembling the application of a crushing weight, as if the front and back were being pulled together. The recumbent position was impossible, and so she moved about the room partially bent, or leaned forward against some support, with short and gasping inspirations, with pallid countenance, and with agony depicted in every feature, until the paroxysm subsided, or until the anguish became unendurable and necessitated the administration of an anæsthetic. The attacks lasted from twenty minutes to three quarters of an hour. Before the present year they seldom occurred more than once a year, and sometimes two or three years intervened between them. During the months of April and May past, however, they had been very frequent; usually occurring once every day and occasionally twice a day. When the attacks became thus frequent electricity was tried in all its forms, together with a varied internal treatment, but without result. Finally the actual cautery was applied to the spine, from the neck to the waist, and since this had been done (now about a month since) the patient had been entirely free from the paroxysms. Having referred to other possible hypotheses in regard to the cause of the trouble, such as biliary calculus, disorder of the heart, and malaria, Dr. Rockwell stated his conviction that the attacks were in all probability due to spasm of the

diaphragm, notwithstanding the absence of certain objective symptoms, such as expansion and immobility of the lower half of the chest, projection of the epigastrium, and closure of the œsophagus, that he had found emphasized in the books.

The discussion of the case was participated in by a number of members, some of whom were unwilling to accept Dr. Rockwell's view of it, although no positive conclusion could be reached in regard to it.

DR. BIRDSALL thought that it might perhaps be due either to hysteria or to hepatic colic.

(To be concluded.)

RHODE ISLAND MEDICAL SOCIETY.

THE Seventy-third Annual Meeting was held in Lyceum Hall, Providence, June 19, 1884. The President, DR. JOB KENYON, called the meeting to order shortly after ten o'clock A. M.

REPORTS OF SECRETARY AND TREASURER.

The SECRETARY read the Records of the Annual Meeting of 1883, and of the last Quarterly Meeting. The Annual Report respecting the membership of the Society was then read, which showed that four Fellows died during the past year, their average age being sixty-two years. There were nine additions, the present active membership being one hundred and eighty-seven.

DR. CHARLES H. LEONARD, Treasurer, presented his annual report. The income for the year, including the balance from the old account, was $983.02. Outgo, $764.14. Balance to new account, $218.88.

The Printing Fund increased during the year to $1533.43, to which the Society voted to transfer $200 from the unexpended sum in the treasury.

THE FISKE FUND.

DR. C. W. PARSONS, Secretary of the Trustees of the Fiske Fund, reported that a premium of $300 had been awarded to CHARLES V. CHAPIN, M. D., of Providence, for the best essay on the Origin and Progress of the Malarial Fever now Prevalent in New England. On the other subject proposed they make no award.

The Trustees propose the following subjects for 1885: —

(1.) Original Investigations in Household Hygiene.

(2.) The Present State of the Germ-Theory of Disease.

(3.) Physiological and Pathological Effects of the Use of Tobacco.

(4.) Migraine, its Nature and Treatment.

For the best dissertation on either subject worthy of a premium they offer a prize of $200.

REPORTS ON THE LIBRARY AND ON PUBLICATIONS.

DR. T. NEWELL, Chairman, presented the Fifth Annual Report of the Committee on the Library, exhibiting the gratifying increase of 1086 volumes during the year. The library is open daily at 54 North Main Street from two to six P. M.

DR. G. W. PORTER read the Annual Report of the Committee on Publications. The Transactions for the year 1883 is considerably smaller than for several previous years, partly because there were fewer papers presented to the Society during the year, and partly because some of the readers declined to furnish their papers for publication.

ELECTION OF FELLOWS.

DR. J. W. C. ELY read the Report of the Board of Censors, and as recommended by the Board the following physicians were elected Fellows: Henry S. Swan, of Bristol, Abraham Z. Falcon, of Central Falls, William A. Tremaine, Byron J. Lillibridge, Sanford S. Burton, and Benjamin R. Symonds, of Providence.

LEGISLATION. MEETINGS OF OTHER SOCIETIES.

DR. LLOYD MORTON, on behalf of the Committee on the Medical Examiners' Bill, reported that the bill adopted at the last Quarterly Meeting of the Society had been passed in a modified form by the General Assembly of Rhode Island. The act as passed takes effect on the first day of July, 1884.

DR. J. H. ELDREDGE read a Report of the Thirty-Fifth Annual Meeting of the American Medical Association lately held in Washington.

DR. ANITA E. TYNG, of Philadelphia, sent a report of the same meeting, with special reference to the work of the Section on Obstetrics.

DRS. ARIEL BALLOU and W. E. ANTHONY also reported verbally.

DRS. F. B. SMITH and G. T. SWARTS presented reports of the Annual Meeting of the Connecticut Medical Society.

The President introduced DR. C. HOWE, of Taunton, as a delegate from the Massachusetts Medical Society. DR. HOWE responded pleasantly.

ELECTION OF OFFICERS.

Officers for 1884–85 were elected as follows: Oliver C. Wiggin, President; Horace G. Miller, First Vice-President; John W. Sawyer, Second Vice-President; George D. Hersey, Recording Secretary; Edward M. Harris, Corresponding Secretary; Charles H. Leonard, Treasurer. Censors: Ariel Ballou, J. H. Eldredge, J. W. C. Ely, G. P. Baker, S. S. Keene, Benjamin Greene, E. T. Caswell, Eugene Kingman. Committee on the Library: T. Newell, H. G. Miller, G. D. Hersey, O. C. Wiggin, G. W. Porter. Committee on Publications: G. W. Porter, R. F. Noyes, C. D. Wiggin. Dinner Committee: C. H. Leonard, W. E. Anthony. Auditing Committee: C. W. Fabyan. Dr. Lloyd Morton, of Pawtucket, was appointed Anniversary Chairman for the annual meeting of 1885. The President appointed as a Committee on Necrology, Drs. C. W. Parsons, E. T. Caswell, and Albert Potter. Providence was selected as the place of the quarterly meeting in September.

DECEASE OF DRS. BULLOCK AND PERRY.

DR. W. E. ANTHONY, from a committee appointed at the last meeting, presented the following minute, which was accepted and ordered recorded: —

Whereas, In the decease of DRS. OTIS BULLOCK and THOMAS W. PERRY this Society has lost two members who had long been connected with it:

Resolved, That we desire to place on record our appreciation of those traits of character by which they had attained a position of honor and usefulness in the Society and community. Dr. Bullock was for one year President of the Society, and for forty years was a member of the Board of Censors, and, as such, conscientiously fulfilled all the duties pertaining to the office with unfailing kindness and courtesy.

Dr. Perry was a frequent attendant on our meetings

and often contributed the results of his large experience to the discussions.

Resolved, That these resolutions be entered on our record and a copy of the same be sent to the families of the deceased.

ANNUAL ADDRESS. DINNER.

At one P. M. the Annual Address was delivered by George I. Chace, LL. D., his subject being Theism, Viewed from the Physician's Stand-point.

At the close of the address the thanks of the Society were voted to Professor Chace for his thoughtful and timely discourse, and a copy requested for the archives of the Society.

The Annual Dinner was served at the Narragansett Hotel. Dr. J. W. C. Ely presided as Anniversary Chairman. After-dinner speeches were made by ex-President Kenyon, President-elect Wiggin, Professor Chace, Rev. Dr. Woodbury, Prof. Alonzo Williams, Dr. Ariel Ballou, and Dr. Charles E. Woodbury, Superintendent of Rhode Island Hospital.

MASSACHUSETTS MEDICO-LEGAL SOCIETY.

W. H. TAYLOR, RECORDING SECRETARY.

The seventh annual meeting, at the rooms of the Boston Medical Library Association, June 10, 1884, was called to order at 12.05 P. M. by President Presbrey, twenty-one members being present. The records of the last meeting were read and approved. The President introduced Associate Member Max F. Eller, Esq., of New York, to the Society.

REPORTS.

Corresponding Secretary Pinkham made the report of the Executive Board, showing the work of Medical Examiners throughout the State as far as the account of it can be obtained. Medical Examiner Tower, the Treasurer, made his report, showing the financial condition of the Society.

ELECTION OF MEMBERS.

Medical Examiners Frank W. Pierce, of Marston's Mills, Julian A. Mead, of Watertown, and Justin G. Hayes, of Ipswich, were unanimously elected to active membership. Drs. Alfred Hosmer, of Watertown, and Y. G. Hurd, of Ipswich, were unanimously elected to active membership.

Voted, on motion of Medical Examiner Pinkham, that numbers of the last Transactions be sent to medical examiners not members of the Society who have contributed to statistics.

THE LAW OF MEDICAL EXAMINERS.

The committee to "consider the Law of Medical Examiners," etc., made a report, and offered some amendments to the present law.

Voted, on motion of Medical Examiner Pinkham, that the report be laid upon the table until the meeting of the Society in October.

Voted, on motion of Medical Examiner Lynde, that the proposed amendments to the law of medical examiners be printed and distributed to members of this Society before the October meeting.

PRINTING THE TRANSACTIONS.

Voted, upon motion of Medical Examiner Draper, that an edition of three hundred copies of the Transactions for the current year be printed.

Voted, upon motion of Medical Examiner Draper, that authority be given to the Standing Committee to publish in the appendix of the Transactions such medico-legal reports contributed by members of this Society and printed in the *Boston Medical and Surgical Journal* as the Committee may deem expedient.

ELECTION OF OFFICERS.

Proceeding to ballot, Medical Examiner S. D. Presbrey was elected President, Medical Examiner F. Winsor Vice-President, Medical Examiner J. G. Pinkham Corresponding Secretary, Medical Examiner W. H. Taylor Recording Secretary, Medical Examiner C. C. Tower Treasurer for the ensuing year. Medical Examiners Draper, Gleason, and Sullivan were appointed Standing Committee for the ensuing year.

READING OF PAPERS.

Max F. Eller, Esq., of New York, read a highly interesting and valuable paper on A Few Medico-Legal Features of Life Insurance.

Voted, on motion of Medical Examiner Draper, that the thanks of the Society be extended to Mr. Eller, and that his manuscript be requested for publication.

Papers were read by Medical Examiner F. W. Draper on A Case of Homicide by a Wound of the Vulva, with Specimen; by Medical Examiner S. D. Presbrey, entitled Notes of two Autopsies; and by Medical Examiner George Stedman on A Case of Drowning. The papers were all of great interest, and were received with applause by the Society.

Recent Literature.

The Laws of Health. By Joseph C. Hutchison, M. D., LL. D. New York: Clark & Maynard. 1884.

This is an elementary text-book upon physiology and hygiene, the object of which, as stated in its preface, is "to present, in clear and concise language, the knowledge of to-day concerning the laws of health and the effects of narcotics and stimulants as far as possible in a work so elementary. It is specially designed to meet the requirements of grammar schools, but is also adapted to those of a higher grade."

The physiological effects of the habitual and the occasional use of stimulants and narcotics are treated in connection with the chapters on Food and Drink, Digestion, Circulation, and the Nervous System.

Humanitarians, organized workers, legislators are untiring in their efforts to stay the progress of intemperance by various methods, some of which are well advised and others ill advised, but the more recent proposal of educators to remedy the evil by the early training of the child gives promise of better results.

The prevention of an evil by correct education in early life is a more encouraging process than its cure by any treatment, either mild or heroic, in later years, and the timely appearance of this text-book by Dr. Hutchison is well calculated to meet the demand for such elementary instruction as it contains.

Medical and Surgical Journal.

THURSDAY, JUNE 26, 1884.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
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THE TUBERCLE BACILLUS.

IT is natural that pathologists, impressed by the specific character of tuberculous disease and its ready inoculability, — with, moreover, facts before them proving the infectious properties of dried tuberculous sputum when inhaled by animals, — should early have come to the conclusion that tuberculosis is a communicable disease, having generic and pathogenetic affinities with the zymotic contagious diseases, being dependent like them for its origin and manifestations on a self-multiplying element foreign to the organism in which it exercises its irritant and lethal influence. But what might this causal element be? a chemical poison impregnating and oppressing the system, or a microbe, akin to the moulds, intruding itself into the higher life, and finding there a receptivity — pullulating, developing, and luxuriating at the expense of the organism which becomes its habitat? All the evidence of analogy is against the former supposition, and there is every analogy in favor of the latter, but experimental research has given demonstration of a more satisfactory kind.

Leaving one side the history of investigations undertaken to establish the bacterial origin of acute febrile diseases universally recognized as communicable, a history almost dating from Pasteur's Studies on Fermentation, and the brilliant discoveries of Devaine and Ferdinand Cohn, it is to Villemin that is due the credit of having first clearly indicated the contagious nature of tuberculosis, and its inclusion among parasitic diseases. Villemin's views were based on the results of inoculations of guinea-pigs and rabbits with minute quantities of tuberculous matter, and the communication and diffusion of tuberculosis thereby. The memoir of Villemin was published in 1865. Facts were even then accumulating to show the parasitic origin of all contagium, but the specific bacterium of no single infectious disease had been positively determined. Villemin boldly asserted the parasitic origin of tubercle, and showed how strikingly in harmony is this conception of the disease with the doctrine, formulated by Laennec, and then becoming popular, of the unity of phthisis.

Dating from the year 1877, several experimenters, notably Klebs, Schuller, Reinstadler, Toussaint, believed that they had discovered the parasite of tuberculosis, and practiced inoculations with the microbe to which they attributed the disease. Their inoculations were without effect, the bacteria which they had isolated being only common bacteria. The same may be said of the micrococcus and the corpuscles called zoöglœ which were found in the giant cells of tubercle by Rindfleisch, Aufrecht, Malassez, and others. The 24th of April, 1882, Dr. Robert Koch, of Berlin, demonstrated to the Medical Society of that city a new micro-organism of rod-like form, belonging to the genus bacillus, characteristic in its chemical and morphological properties and effects, which he claimed to be the true pathogenic and virulent agent of tuberculosis. Koch arrived at the discovery of this microbe by a peculiar process of staining which, as somewhat modified and improved by later workers, consists in coloring the morbid substance by aniline, then subjecting the preparation to the action of dilute nitric acid, which decolorizes all the figured elements except the bacillus. The section is finally colored anew in vesuvine, which stains all the other microbes blue, the tubercle bacilli alone retaining the brown color acquired from the aniline. Thus obtained the bacilli appear as very thin rods, whose length is about one fourth that of a blood corpuscle.

It is probable that no announcement ever made a profounder sensation in the medical world, or was received with more enthusiasm. Here was a field of investigation for the mycologists and the pathological histologists of which they were not slow to take possession. The first demonstration of the ætiological relation of the bacillus to tubercle is concomitance; if invariably and always the microbe is found to accompany the disease, the presumption is warranted that it is the cause, though it may be the effect. The first step, then, to prove a causal relation is to prove the constant presence of the specific parasite in tuberculous tissue, or in the products of tubercle. This, the easiest part of the demonstration, within the reach of even the amateur microscopist, has been quite thoroughly worked out.

In a prize essay recently read before the French Academy of Medicine the author, M. Herard, sums up as follows an answer to the question "Is the bacillus *constant?*" "The researches, to-day very numerous, of competent histologists in every land agree in this: The bacilli are found, with very few exceptions, in all the products of the excretions of a tuberculous organ, and notably in the sputa of phthisical patients. Constantly, or almost constantly, they are observed in the divers tuberculous lesions; yet while in certain cases the quantity of bacilli is considerable, and they are found in all the lesions, whatever the stage of evolution of the disease, in other cases the number is small, and they are seen in greatest abundance in the young granulations, and especially in the centre of the granulations in the giant cells. When the bacilli are wanting in the parts that have undergone caseous degeneration they are generally met with in abundance in the surrounding zone which contains the granulations recently developed. Sometimes the bacilli are only found in the walls of cavities or of ulcerated bronchi, and there they are very numerous." The bacilli then, according to M. Herard, exist in variable number according to the degree of evolution of the

lesions; abundant in the earlier stages when the tuberculous development is active, they are less and less numerous as destruction and elimination take place, and the soil becomes, presumably, less fitted for their nurture and support. In later periods of the disease other microbes — those of putrefaction — seem to acquire predominance.

With regard to the few exceptional cases where the bacilli have not been found it is safe to say, according to M. Herard, that either the disease was past the stage of active development of the specific microbe or that the manipulations undertaken to show them were not sufficiently exact.

Granting constant concomitance, is it not possible that Koch's bacillus may accompany other lesions than those of tuberculosis? The voice of the experts thus far negatives this question. The bacillus is not found in any pulmonary affections except such as constitute phthisis, and its presence becomes a very valuable diagnostic sign. Some authorities, among whom we may mention Germain Sée, Dreschfeld, Celli, and Guarnerini, would hesitate to pronounce a diagnosis of phthisis in the absence of the specific bacillus from the expectoration. Sée claims to have diagnosticated phthisis by the bacillus in the sputum before the stethoscopic signs were sufficiently pronounced to warrant affirmation of the existence of the disease.[1] But concomitance alone proves nothing; the bacillus must be shown to be the cause and not the effect, nor even an unimportant accompaniment. Here two lines of evidence are open: production of the disease by inoculation with the microbe, and suppression of the disease by removal of the microbe. The former line of proof is alone available at present to experimental pathologists. It must be confessed that in this department of inquiry but little has as yet been done. Were it not for Koch's brilliant success in the culture of the bacillus, after Pasteur's method, a method, however, differing from that of Pasteur in that Koch, after many trials and failures, found that a solid medium (gelatinized blood) was every way more favorable for the perfect isolation and development of the microbe than the ordinary liquid media; were it not, moreover, for the positive results which he obtained from inoculations with the bacterial product of a long series of cultures, thus demonstrating the genesis of tubercle from a figured element alone, it could not yet be affirmed that the parasitic theory of tuberculosis stands on a substantial scientific basis. Those, moreover, who are not willing to accept Koch's experiments as conclusive, or who still believe that these experiments were in some yet unexplained way vitiated by error, will look for more proof before they are convinced. It is true that such conscientious experimenters as Baumgarten[2] have demonstrated that tubercle owes its virulence and its contagium to the presence of bacilli by showing that granular and caseous matter, phthisical sputa, etc., when inoculated in animals, does not engender tubercle if previously deprived of its bacteria. This is excellent confirmatory evidence, but we still await the more important corroborative testimony of mycologists who shall have followed Koch's method and obtained the same results.

"Truth never can be confirmed enough,
Though doubts did ever sleep."

Finally, in this whole matter of tuberculous ætiology, predisposition plays an important part. Not every man or animal can become tuberculous, and the soil must be adapted to the parasite or it cannot find a habitat and thrive. There must be a peculiar receptivity either inherited or acquired. This susceptibility of constitution and of tissue, then, constitutes the initial step in the genesis of tuberculosis, and it is against this predisposition that prophylactic medicine is mainly directed. The condition of organism most favorable to the inroads of the parasite is one of lowered vitality, with the pulmonary alveoli unprotected by epithelium, a condition likely to follow a severe catarrh. Here the bacilli find ready access to the lungs in the air of respiration, and, unless the vital resistance of the economy can be aroused to overcome them, do their work of destruction.

We do not attempt at present even to refer to the light which the parasitic theory of tubercle sheds on the unity of scrofulosis and tuberculosis and of the varied forms of phthisis.

[1] Diagnostic des Phthisies Doutenses, etc., Paris, 1884.
[2] Centralblatt, 1883, No. 42.

REPORT OF CASES TREATED IN WARD XIX. ROYAL INFIRMARY, EDINBURGH.

Nowadays the records of abdominal surgery are in general very cheerful reading. They have many of the elements of romance, and one rises from perusing them with a thrill of excitement quite as great as that which one experiences from reading an exciting tale of adventure. There is the deadly peril hanging imminent over the unfortunate victim, who is a prey to suffering and despair, the desperate venture, the hair-breadth escape, the alternation of hope and fear, the final victory over the dread disease, and the restoration to health of one doomed to die.

This makes a very bright page in the history of medicine, and the sense of exhilaration is surprisingly vivid when fresh from reading such a series as that contained in the Report of Cases Treated in Ward XIX. of the Royal Infirmary, Edinburgh, by Thomas Keith. The number is not large, only seventy-nine, but it represents the work of about three years in that institution, in this one direction. There seems to have been in this number an unusually large proportion of what would be considered desperate cases. There were ten cases of hysterectomy for fibrous tumors, and sixty-nine of ovariotomy. Only thirteen of the cases of ovariotomy were without adhesions, and but two of the cases of hysterectomy could be called simple. Yet the mortality was slight, five deaths in all; two from undoubted septicæmia, two from carbolic-acid poisoning, and one probably from exhaustion.

It is interesting to notice Keith's attitude towards pure Listerism, so-called. Of eighty-two cases of abdominal section (two cases of Battey's operation, and one for interstitial pregnancy being included), twenty-

four were done under carbolic-acid spray, with four deaths, two under boro-glyceride spray with one death, and fifty-six without spray with but one death. He therefore says: "The performing of operations under carbolic spray has been abandoned as being of doubtful efficacy in preventing septicæmia, and as sometimes being in itself a source of danger in certain long operations, and in some conditions of the constitution."

We do not propose to discuss methods of operation. The questions of spray or no spray, ligature or cautery, extra or intraperitoneal treatment of the stump, drainage or no drainage, must be decided according to the individual experience of the operator. We are yet in the infancy of abdominal surgery, and have not yet proven all things, to know what we may hold fast.

But certain reflections involuntarily occur after reading such a report as the one before us. There is evidence of a strong conscientious desire to relieve suffering humanity, even at the risk of spoiling a good record. The most hopeless cases were given the chance, even though it was a last resort, and we are led to feel that almost no combination of circumstances, however unfavorable, warrant a refusal to operate.

Accuracy of diagnosis is of primary importance in abdominal surgery. When the incision is made, not for the purpose of exploring, but of carrying out quickly and thoroughly what has been determined upon before hand as the thing to be done, the surgeon has won half the battle.

From the report of Keith's cases it is easy to see that he deprecates meddlesome interference after operation. He trusts largely to the *vis medicatrix naturæ*, and does not with heroic measures combat symptoms which to us seem unfavorable, but which may after all be nature's method of averting some more grave issue.

It cannot be said that the operations described in this report were performed under the most favorable circumstances, and yet the results were exceedingly satisfactory. We will hope that the next report will be yet more encouraging.

MEDICAL NOTES.

— Dr. Wilson, of Louisville, has used with success the inner membrane of a hen's egg for skin-grafting. One egg will supply an indefinite number of grafts.

— A paper in the *London Medical Times* (March 8th) condemns the wholesale removal of tonsils for chronic inflammation. The disease is peculiar to certain individuals, usually those of a strumous type. In many cases other lymphatic enlargements coexist. The cause of the fluctuation in size in the same person, and of the regrowth after removal, is to be looked for in the anatomy of the organ. It is made up entirely of lymphatic and adenoid tissue. The symptoms produced are the peculiar expression of the face, the noisy breathing at night, occasional deafness, and less frequently abdominal pain and capricious appetite. So long as deglutition and respiration are not interfered with the size of the tonsils is usually a matter of little importance. A strong tendency to atrophy as age advances exists. When the tendency to hypertrophy is still present it is almost certain to show itself after ablation. The general, not the local, condition should be aimed at as the object of treatment. In most cases it is found that cod-liver oil and iron will do as good work before as after operation. Except for the one cause of local obstruction there is no more reason for removing hypertrophied tonsils than any other enlarged lymphatic glands.

— "Jacob the Zouave," formerly a private in a French regiment of zouaves in Algeria has been making himself a prominent figure in Paris of late. He had acquired some facility as a mesmerist, and, returning to Paris, set up for himself as a healer is no less a quarter than the Champs Elysées, where patients of the highest ranks thronged his cabinet. To keep within the letter of the law he asked for no fees, but insisted on selling his portrait to every patient, the resulting income amounting to some fifty dollars a day. He has found it convenient to remove at frequent intervals from one part of the city to another, but his refined clientèle, as a class, if not as individuals, still attend him.

Correspondence.

MATERIA MEDICA AT THE HARVARD MEDICAL SCHOOL. LETTER FROM PROF. R. T. EDES, M. D.

BOSTON, *June* 19, 1884.

MR. EDITOR, — I am much pleased that the JOURNAL appreciates at its true value the excellent and admirable collection of materia medica in the new Museum of the Harvard Medical School.

I regret, however, that you do not give credit to Dr. W. P. Bolles for the great amount of labor he has spent upon it, but also for the arrangement, upon which you justly comment approvingly, which is, so far as I know, his own in conception and carrying out.

I am, yours truly,

ROBERT T. EDES.

LETTER FROM VALPARAISO.

VALPARAISO, CHILI, *May* 7, 1884.

MR. EDITOR, — As a requisite for professional standing and right to practice in Chili a medical man, no matter from what University he brings a degree, is required by the government to pass an examination before the Faculty of the Medical Department of the University of Chili. The degrees which are recognized, and those of Harvard University are among the few from the United States which are accepted, entitle one to be considered a "licentiate," and therefore a practical examination is all that is required of one presenting such a diploma. This consists in the examination and diagnosis of two medical and two surgical cases before a board of five of the professors, the per-

formance of a couple of operations on the cadaver, and, lastly, a public *viva voce* examination lasting from an hour and a half to two hours, with special reference to the cases seen. The questions, however, are by no means limited to the cases in hand, but extend over a wide range, touching on pathology, therapeutics, theory and practice, surgery, gynæcology, obstetrics, and prescription writing.

The hospital where patients were seen and examined is one devoted entirely to men. It was founded in 1542 by Pedro Valdivia, Pizarro's lieutenant, who in 1541 chose one of the most fertile and beautiful valleys of the country for the site of Santiago. The hospital is built in squares, which have broad balconies running all around the inside, so that patients during convalescence have no lack of out-door life, which can be enjoyed almost the whole year round. In its sanitary arrangements, the quality of food, the nursing of patients, the use of temperature charts, and keeping of records there is much advance yet to be made; but the general arrangement of the institution is good, and well suited for the clinical instruction given. In one way this is advantageously conducted, and that is that students are assigned cases, and have to study them and give their results before the class and instructor, at the bedside. In one ward I saw two cases of an affection but rare in the United States, namely, abscess of the liver. It is quite prevalent here, as one frequently hears of the aspiration of such cases. As a rule it appears as a sequel to dysentery, which also prevails, and is supposed to be due often to the eating of a preparation of pork, with about an equal quantity of red pepper. When this active irritant is followed by the favorite popular spirit aguardiente, fire water, it is thought sufficient explanation of attacks of sporadic dysentery. In fact, popular tradition warns the people to refrain from piling Pelion on Ossa in this way. Some day I hope to be able to report some cases of this disease.

The one word which is said to characterize these South American people is "mañana," to-morrow. In attempting to be received here one is made painfully aware of this procrastination. Much patience is needed, and one may count himself fortunate if he has a day assigned him within six weeks of his first making application. Some claim that the theory of protection is here extended to shield native medical talent. This I do not believe, but rather recognize the merit of a system which seeks to prevent ignorance from clothing itself in a title, and bringing discredit on the profession and injury to the public. Certainly there was no evident intention of excluding one whose education had been obtained abroad. The examination, of course, is in Spanish. It was calculated to test one's theoretical and practical knowledge, but while rigid was perfectly square and straightforward.

During the oral examination I was struck by hearing quite a hum, among the students present, when, speaking of rapid dilatation for organic stricture, I spoke of administering ether. Here ether is practically unknown, the only anæsthetic used or spoken of being chloroform. My morning's experience at the Charity Hospital of this city, where I was present and assisted in a couple of operations, may not be without interest. One was a young woman with caries of a metatarsal and cuneiform bone, to whom I administered chloroform. The patient had previously been operated upon and taken the anæsthetic nicely. This time all went well for a few minutes, — aspect, breathing, and pulse good, — when suddenly respiration ceased. With artificial respiration the patient shortly cried, and began to breathe. The removal of the carious bone being desired, the chloroform was again applied, as previously, on Esmarch's wire and gauze apparatus, though cautiously. The pulse was good, aspect and breathing natural, but being administered very slowly the patient did not readily succumb to its influence. As soon as the conjunctival reflex ceased I reported being ready for the operation, but immediately the respiration again ceased. The patient was placed on the side of the table, head hanging down, tongue withdrawn, and artificial respiration performed for some minutes without effect. The battery was then procured and applied, and we had the satisfaction of witnessing the return of the rhythmical abdominal and thoracic movements. The operation was continued without further anæsthetic, one fourth of a grain of morphia being injected subcutaneously.

From the woman's ward we proceeded to the soldiers' quarters on the hill to witness a resection of the tibia. This case, too, had been operated on before, and with chloroform, when a section of bone four inches long had been removed. A couple of sinuses had remained open, and now the probe touched loose necrosed bone. The patient was apparently taking the chloroform well, and was soon limp. Remembering the morning's events, one of the attending surgeons advised the withdrawal of the anæsthetic. It was done, but at that moment a peculiar pallor came over the patient's face, and all respiratory movements ceased. The operator had been watching the pulse, and just moved to the foot of the bed. I stepped forward, and, taking the wrist, could not assure myself of any pulse. The head was immediately lowered, tongue withdrawn, abdomen and chest slapped with a wet towel, ammonia injected subcutaneously, artificial respiration continued for twenty minutes, and the battery used to stimulate the phrenic nerve, but without avail. There was no pulse or cardiac impulse at any time after noting the sudden change in the patient's condition, and respiration could not be restored. In the first case, both times, the respiratory movements ceased without any warning, while the cardiac contractions continued. In this case artificial respiration, performed according to Sylvester's method, and stimulation of the phrenic nerve restored breathing; whereas in the second case, again without any warning, the aspect betokened syncope, and both cardiac and respiratory contractions ceased together, and in this nothing availed to save life.

At the Boston City Hospital an almost daily experience with ether for twelve months showed that it had dangers, but fortunately they gave warning of their approach, and could be guarded against, beginning stertorous breathing or lividity warning one to desist, and never did I see any unfortunate result. Since settling here I have probably seen fifteen or twenty operations with chloroform, and in two of those have witnessed sudden collapse, which proved fatal in one.

The United States man-of-war Shenandoah anchored in our harbor a few days ago, and the daily papers reported her having yellow fever on board, but as her boats can be seen going to the landing the rumor must have been false. JOHN TRUMBULL, M. D.

P. S. May 8th. At an autopsy of the case reported no abnormality about the heart or its valves was detected; and examining the woman the area of cardiac dullness and heart sounds were found normal.

Miscellany.

A CASE OF EXTRA-UTERINE GESTATION. DELIVERY OF A LIVING CHILD PER VAGINAM. REMOVAL OF PLACENTA. RECOVERY.

THE following unusual case was recently reported to the Obstetrical Society of London by Dr. Mathieson, of Ontario.[1] In spite of the success of the operation in this particular instance, the general opinion of the Society was strongly against the vaginal operation, compared with abdominal section in such cases: —

The patient was aged thirty, the mother of five children. In November, 1880, menstruation (which had been regular, though scanty for two months) ceased, and abdominal pain began. In December, 1880, a lump was noticed low down in the left inguinal region. She was first seen by the author in March, 1881, when she had a tumor rising to the level of the navel, filling the left vaginal region and extending two inches to the right of the middle line. The uterus could not be mapped out. The sound passed three and a half inches, slightly to the right side and in front of the tumor. There was occasional pain in the tumor, tenderness, and a feeling "like jelly moving" which made her feel sick; painful micturition, irregularity of bowels. The tumor continued to enlarge, fœtal movements became stronger, and the pain more severe. On April 12th she had an attack of pain and nausea, with pulse 146, temperature 103.6° F., cold extremities and cold sweat; relieved by morphia. A similar attack occurred on April 23d, another on May 2d, and another about May 18th. On June 2d a somewhat similar attack was accompanied by pretty regular labor-like pains, independently of fœtal movements, and accompanied by a red discharge. The tumor continued to grow, and the most rapidly growing part was always the most painful. On June 13th occurred another attack like the last, but the pains were bearing down, though no bulging during them could be felt per vaginam. On June 28th she had a very severe attack of pain during micturition, followed by attacks of syncope. The roof of the vagina was filled with a doughy mass, solid on deeper pressure. Operation per vaginam was at once decided on, and performed without chloroform at the patient's request, by cutting with a knife and tearing with the finger nail. The face of the child was found presenting, and was delivered by forceps easily. It was stillborn, but soon revived. The placenta was at the posterior and left side of the cavity, its lower border some two inches from the vaginal roof. It was easily peeled off, a sponge soaked in perchloride of iron following it up. There was very little bleeding. The clots were removed from the cavity, its walls were touched with perchloride, and the operation ended. Much exhaustion followed the operation. The child weighed eight pounds seven and a half ounces, and appeared mature. The placenta was three-lobed, but was destroyed before a careful examination could be made. The after-treatment consisted in washing out the cavity antiseptically. The opening healed in three months. Severe pain in the side lasted for nearly two years after the operation. She was seen in August, 1883, in excellent health, had no pain except after great fatigue; had menstruated normally for six months. The child was healthy, the largest, and a great deal the heaviest, of the family.

[1] Medical Times, May 31st.

THE COURSE OF THE FEVER IN ACUTE CROUPOUS PNEUMONIA.

SILVESTRINI[2] dwells upon the somewhat neglected irregularity of the fever in acute pneumonia. The temperature, he thinks, practically does not, as a rule, adapt itself to the classical three periods of the disease.

There are cases of pneumonia which run their course in three days, others in much more; and the temperature follows in its behavior the various phases of the morbid process. The temperature-curve is irregular even in cases of frank pneumonia following a typical course; if the temperature be taken every two hours, oscillations are noticed which escape observation if the thermometer be only used twice a day. The author records cases in which objective examination and consideration of the thermic curve showed that rise of temperature always coincided with the appearance of a new pneumonic nucleus, and diminution or cessation of fever with the appearance of the signs of hepatization. At this moment, when the exudation coagulates, a compression is produced between alveolus and alveolus, and arrest of the blood and lymphatic circulation, and hence absorption of the pyrogenic products of inflammation is prevented. Fever only accompanies the period of exudation, during which the absorption of the pyrogenic products is facilitated; every elevation of temperature corresponds to a new invasion of the process, the pneumonia being considered as the union of so many pneumonic processes, which succeed one another with greater or less rapidity in different cases; and this succession of accesses goes *pari passu* with the oscillations of the thermic curve. The duration of the morbid process is short, the succession of anatomo-pathological periods rapid; but the nature of the process is to diffuse itself in other territories, where the same phenomena are developed, capable of producing the same manifestations. If the invasion take place quickly, there will be almost continuous fever; if slowly and interruptedly, the fever will have a more or less regularly intermittent type. If the pneumonia invade one tract only of the lung, and be arrested there, it will give rise to symptoms only lasting one day or two; if the process invade gradually all parts of a lung, there will be fever of long duration. The diffusion of the morbid process is by the bronchi, and not by lymphatic absorption or contiguity. If the diffusion took place by contiguity, those cases in which the process invades irregularly various zones of the lung could not be explained.

BIPOLAR VERSION IN PLACENTA PRÆVIA.

THE *Medical Times and Gazette* (May 24th) quotes with approval as being in agreement with the practice of some of the best English accoucheurs an article in a recent number of the *Zeitschrift für Geburtshülfe und Gynäcologie*, by Dr. C. Behm, of Berlin. It is based on cases observed in the clinic of Professor Gusserow. The author's experience of placenta prævia consists of fifty-three cases, of which the first thirteen were treated by plugging, rupture of the membranes, and version by the old "internal" method. They comprised five cases, in which the placenta was completely prævia; five partial or "lateral" (to use Dr. Behm's word), and three marginal. Of the thirteen, four mothers

[2] Revista Clinica, November, 1883. London Medical Record, February 15, 1884.

died, that is 30.8 per cent., and of the nine who survived, four suffered from febrile illness during the lying-in. The children were fourteen in number, and ten of them died during or soon after birth, a mortality of 71.4 per cent. These percentages Dr. Behm compares with the statistical statements of other writers, and finds that they represent about an average mortality. The principle of treatment adopted by Dr. Behm, in his latter forty cases, was that of bimanual version, after the method of Braxton Hicks, as early as possible, one foot being brought down through the os, and the labor then left to be gradually completed by the natural efforts, the pressure of the breech on the cervix being trusted to restrain hæmorrhage. The result was, that he lost not a single mother out of the forty. The infantile mortality was 77.5 per cent. Hofmeier, out of thirty-seven cases, treated in a similar way, only lost one mother, but of the children sixty-three per cent. In Dr. Behm's series of forty cases, he performed early bipolar version thirty times. In seven the membranes ruptured early, so that version had to be longer delayed, and three were cases of head presentation, in which delivery was left to Nature. The advantages of this plan of treatment, Dr. Behm points out, are these: (1.) The necessary intervention is effected early, as soon as the os will admit two fingers, before the mother has lost much blood, or become exhausted. (2.) The breech, drawn down upon the os by slight pressure, forms a perfect tampon. (3.) As delivery is effected slowly, shock is avoided. As to the technique of the operation, Dr. Behm remarks that two fingers should be introduced through the os. If the cervix will not admit two fingers, it should be dilated with water bags. If the presentation of the placenta be complete, it will be found that it separates most easily on the side nearest to its edge; if the edge cannot be reached, it is best to perforate the placenta. After the breech has been brought into the os uteri, expulsion is best left to Nature. The accoucheur's motto in these cases should be, "haste with patience" (*Eile mit Weile*), haste in turning, patience in extraction.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 14, 1884.

Cities.	Estimated Population.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Consumption.	Diarrhœal Diseases.	Diphtheria and Croup.	Measles.
New York	1,340,114	621	269	22.72	14.24	8.00	6.08	3.36
Philadelphia	927,995	—	—	—	—	—	—	—
Brooklyn	644,526	192	62	15.08	21.32	5.21	2.60	.52
Chicago	632,100	214	112	30.55	9.40	3.76	6.11	3.20
Boston	423,800	159	53	10.08	16.78	3.15	1.89	—
Baltimore	408,520	131	60	21.28	12.16	9.88	1.52	3.04
St. Louis	400,000	—	—	—	—	—	—	—
Cincinnati	272,400	87	42	15.47	11.90	4.76	3.57	—
New Orleans	234,000	178	84	34.16	8.96	16.80	1.12	2.81
Buffalo	201,000	—	—	—	—	—	—	—
District of Columbia	194,310	—	—	—	—	—	—	—
Pittsburg	180,000	64	31	20.28	6.24	—	12.48	3.12
Milwaukee	142,400	47	25	17.04	21.28	6.39	6.39	—
Providence	119,405	—	—	—	—	—	—	—
New Haven	62,882	27	11	11.10	11.10	3.70	—	—
Nashville	54,400	21	8	9.52	14.28	—	—	—
Charleston	52,286	40	11	15.00	17.50	5.00	—	—
Lowell	71,447	19	4	5.26	31.56	—	—	—
Worcester	69,442	18	7	11.11	11.11	—	5.55	—
Fall River	62,674	13	7	15.38	15.38	7.69	—	—
Cambridge	60,995	12	4	—	16.66	—	—	—
Lawrence	45,516	7	1	—	14.28	—	—	—
Lynn	44,895	9	0	11.11	22.22	—	—	—
Springfield	38,090	7	1	—	14.28	—	—	—
Somerville	31,350	9	5	22.22	—	—	—	—
Holyoke	30,515	7	4	—	14.28	—	—	—
New Bedford	30,144	1	0	100.00	—	100.00	—	—
Salem	29,503	13	3	7.69	7.69	—	7.69	—
Chelsea	24,347	6	3	16 66	—	—	—	—
Taunton	22,693	6	1	16.66	33.33	—	16.66	—
Gloucester	21,400	10	2	—	30.00	—	—	—
Haverhill	20,905	9	1	11.11	11.11	—	11.11	—
Newton	19,421	4	0	25.00	25.00	—	25.00	—
Brockton	18,323	3	1	33.33	33.33	—	33.33	—
Malden	15,273	—	—	—	—	—	—	—
Newburyport	13,947	6	1	—	16.66	—	—	—
Fitchburg	13,433	—	—	—	—	—	—	—
Massachusetts towns	321,580	51	10	11.76	17.64	1.96	1.96	—

Deaths reported 1991 (no reports from Philadelphia, St. Louis, Buffalo, District of Columbia, and Providence): under five years of age, 823; principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 403, consumption 282, lung diseases 189, diarrhœal diseases 129, diphtheria and croup 85, measles 51, scarlet fever 35, typhoid fever 25, whooping-cough 20, malarial fevers 19, cerebro-spinal meningitis 12, small-pox

nine, puerperal fever nine, erysipelas seven, typhus fever two. From *scarlet fever*, Chicago 11, New York 10, Boston five, Baltimore and Milwaukee two each, Brooklyn, Cincinnati, Pittsburg, Woburn, and Chelsea one each. From *typhoid fever*, New York, seven, Chicago four, Baltimore three, Cincinnati, New Orleans, Spencer, and Charleston two each, Brooklyn, Pittsburg, and Lynn one each. From *whooping-cough*, New York five, Brooklyn, Baltimore and New Orleans three each, Chicago, Boston, and Somerville two each. From *malarial fevers*, New Orleans six, Brooklyn four, New York three, Chicago and Charleston two each, Baltimore and Cincinnati one each. From *cerebro-spinal meningitis*, New York three, Chicago two, Cincinnati, New Orleans, Nashville, Lowell, Worcester, Fall River, and Chicopee one each. From *small-pox*, New Orleans seven, Pittsburg and Nashville one each. From *puerperal fever*, New York, Brooklyn, Chicago, and Cincinnati two each, Boston one. From *erysipelas*, New York, Brooklyn, and New Haven two each, New Orleans one. From *typhus fever*, New York and Chicago one each.

One case of small-pox was reported in Cincinnati; scarlet fever 37, diphtheria 20, typhoid fever seven, and measles three in Boston; scarlet fever 24 and diphtheria seven in Milwaukee.

In 99 cities and towns in Massachusetts, with an estimated population of 1,343,037 (estimated population of the State 1,955,104), the total death-rate for the week was 14.40 against 16.31 and 16.50 for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,762,354, for the week ending May 31st, the death-rate was 20. Deaths reported 3354: acute diseases of the respiratory organs (London) 261, measles 150, whooping-cough 133, scarlet fever 65, diarrhœa 44, small-pox (London 36, Liverpool three, Sheffield, Sunderland, and Cardiff one each) 42, fever 39, diphtheria 27. The death-rates ranged from 11.3 in Derby to 29.3 in Wolverhampton; Birkenhead 17.2; Nottingham 17.3; London 19.2; Birmingham 20.6; Leeds 20.6; Sunderland 22; Liverpool 22.4; Manchester 23; Leicester 23.6; Sheffield 24.1. In Edinburgh 23.1; Glasgow 24; Dublin 22.3.

For the week ending May 31st, in the Swiss towns, there were 29 deaths from consumption, lung diseases 20, typhoid fever 18, diarrhœal diseases 12, diphtheria and croup four, whooping-cough two, erysipelas two. The death-rates were, at Geneva 19.4; Zurich 17.7; Basle 13.2; Berne 25.6.

The meteorological record for the week ending June 14th, in Boston, was as follows, according to observations furnished by Sergeant O. B. Cole, of the U. S. Signal Corps: —

Date. June, 1884.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 8	29.900	76	89	64	71	48	80	66	SW	S	SW	11	12	12	C	C	C	—	—
Mon., 9	29.785	72	84	64	85	62	93	80	SW	SW	W	12	13	7	C	C	C	—	—
Tues., 10	29.974	54	67	52	96	93	90	93	NE	NE	NE	21	16	14	R	O	O	—	—
Wed., 11	30.122	51	55	50	100	98	98	99	E	NE	NE	15	15	5	R	O	O	—	—
Thurs., 12	30.011	56	65	49	100	100	99	100	E	E	N	3	4	8	T	R	R	—	—
Fri., 13	30.272	58	66	57	87	62	77	75	NE	SE	E	14	12	4	T	F	F	—	—
Sat., 14	30.533	52	59	50	96	59	77	77	E	E	S	16	12	2	O	C	C	—	—
Mean, the Week.	30.085	60	69	55				83										20 55	0.33

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM JUNE 14, 1884, TO JUNE 20, 1884.

HAPPERSETT, J. C. G., major and surgeon. Granted leave of absence for four months. Paragraph 5, S. O. 141, A. G. O., June 18, 1884.

CHANGES IN DEPARTMENT OF TEXAS.

PORTER, J. Y., captain and assistant surgeon. From Fort Ringgold, Texas, to Fort Brown, Texas, as post surgeon.

MADDOX, T. J. C., first lieutenant and assistant surgeon. From Fort Clark, Texas, to Fort Ringgold, Texas, as post surgeon.

BLACK, C. S., first lieutenant and assistant surgeon. From Fort Concho, Texas, to Fort Clark, Texas.

S. O. 73, headquarters Department of Texas, June 9, 1884.

LIST OF OFFICIAL CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JUNE 21, 1884.

KNIGHT, J. S., surgeon, ordered before Retiring Board.

HERNDON, C. G., passed assistant surgeon, detached from the Albatross, ordered to attend officers of Navy and Marine Corps in Washington.

FLINT, J. M., surgeon, detached from Smithsonian Institute, ordered to Fish Commission steamer Albatross.

LEACH, P., assistant surgeon, ordered for examination preliminary to promotion.

GARDENER, J. E., passed assistant surgeon, detached from U. S. S. Lancaster, ordered to U. S. S. Powhatan.

BOYD, J. C., passed assistant surgeon, detached from U. S. S. Lancaster, ordered to U. S. S. Powhatan.

BOOKS AND PAMPHLETS RECEIVED. — Clinical Demonstrations on Ophthalmic Subjects. By J. R. Wolfe, F. R. C. S. E., etc. With Illustrations. London: J. & A. Churchill. 1884.

Mittheilungen aus der Chirurgischen Klinik zu Kiel. Herausgegeben von Dr. Friedrich Esmarch. II. Vorschläge zur Beseitigung der Drainage für alle frischen Wunden. Von Dr. G. Neuber. Kiel. 1884.

III. Die Methode des Unterrichts an der Chirurgischen Klinik der Universität Kiel.

On Paroxysmal Fever, not Malarial. By J. H. Musser, M. D. (Reprint.) Philadelphia.

Sixth Annual Announcement of the Fort Wayne College of Medicine. Session 1884–85.

Minutes of the State Medical Society of Arkansas at its Ninth Annual Session.

Hay Fever: its Ætiology and Treatment. A Lecture delivered at the London Hospital Medical College. By Morell Mackenzie, M. D. (Reprint from British Medical Journal.) London. 1884.

A Paper on Extirpation of the Entire Tongue for Cancerous Affections. Read by Basil Norris, M. D., Surgeon U. S. A., before the American Surgical Association. Washington, D. C. 1884.

The General Practitioner's Guide to Diseases and Injuries of the Eye and Eyelids. By Louis H. Tosswill, B. A., M. B., etc., etc. London: J. & A. Churchill. 1884.

The Urine in Disease (Chart). Arranged by Louis Lewis, M. D., M. R. C. S. England. Supplement to The Medical World. Philadelphia.